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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 sample questions in this on-line Item Sampler are representative of the item types and item formats that will be used in the actual test, including those questions with and without art.

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?

All 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 do I use the sample questions?

These questions provide information about the TCAP Achievement Test. The questions in the on-line Item Sampler are representative of questions that will be on the TCAP Achievement Test.

In a classroom learning session, these questions can be used to prepare students for the actual test. Item types with and without art are presented to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this on-line Item Sampler.
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 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.

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.
April 20, 2009

(1) Studying the early settlers have been far more interesting than I thought it would be. (2) I was most fascinated with the experiences the early settlers had on their long journeys as they traveled by foot across the country. (3) To help me better understand their experiences, I decided to make a long journey of my own.

(4) My plan was to walk one hundred miles in eight weeks. (5) I kept a daily record of the distance I traveled and any unusual occurrences. (6) I remembered reading that the settlers often lacked a cart to haul supplies. (7) To make my trip as much like theirs as possible, I carried a backpack filled with supplies. (8) This included enough water to last for three days.

(9) I walked to all the places I normally go, such as school and friend’s houses, but I also added two miles per day at the park. (10) On the first day, I noticed that it took me longer than usual to travel because I was carrying my heavy backpack. (11) I often had to stop to adjust the weight; because I was so uncomfortable.

(12) Some days a gentle breeze cooled my face, providing encouragement to continue. (13) Other times the wind blew or rain poured, making the walk more challenging. (14) I always completed my daily walk. (15) Regardless of the weather conditions.

(16) Four weeks later, I reviewed my journal. (17) At twenty-eight miles, I wasn’t even close to being halfway to my goal! (18) I realized that the settlers must have become frustrated with the slow pace of their travels as well. (19) I began to understand how difficult their experience must have been. (20) More importantly I realized how much the settlers sacrificed in hopes of improving their lives.
1. Read Sentence 10.

On the first day, I noticed that it took me longer than usual to travel because I was carrying my heavy backpack.

What is the correct way to write the underlined word above?

A. long
B. longest
C. more long
D. correct as is

2. Read Sentence 11.

I often had to stop to adjust the weight; because I was so uncomfortable.

What is the best way to revise the sentence above?

F. Because I was so uncomfortable I often had to stop to adjust the weight.
G. I often had to stop to adjust the weight and it was because I was so uncomfortable.
H. Because I often had to stop to adjust the weight; I was so uncomfortable.
J. I often had to stop to adjust the weight because I was so uncomfortable.
3 Read Sentences 14 and 15.

I always completed my daily walk. Regardless of the weather conditions.

What is the best way to combine the sentences above?

A I regardless of the weather conditions, always completed my daily walk.
B Regardless of the weather conditions; I always completed my daily walk.
C I always completed my daily walk, and regardless of the weather conditions.
D Regardless of the weather conditions, I always completed my daily walk.
Reporting Category: 1 Language
Performance Indicator: 0601.1.9 Recognize usage errors occurring within context (i.e., double negatives, troublesome words {to/too/two, their/there/they’re, its/it’s, sit/set, lie/lay, affect/effect, sit/set, lie/lay, may/can, leave/let, teach/learn, accept/except, capitol/capital, principle/principal, between/among}).

4 Read Sentence 7.

To make my trip as much like they’re as possible, I carried a backpack filled with supplies.

What is the correct way to write the underlined word above?

F theirs
G there’s
H their’s
J there’s
5 Read Sentence 9.

I walked to all the places I normally go, such as school and friend’s houses, but I also added two miles per day at the park.

What is the correct way to write the underlined word above?

A  friends
B  friends’
C  friends’s
D  correct as is

6 Read Sentence 1.

Studying the early settlers have been far more interesting than I thought it would be.

What is the correct way to write the underlined words above?

F  Studying the early settlers has been
G  Studying the early settlers had been
H  Studying the early settlers are being
J  Studying the early settlers been
Read Sentence 20.

*More importantly I realized how much the settlers sacrificed in hopes of improving their lives.*

What is the correct way to write this sentence using a comma?

A. More importantly, I realized how much the settlers sacrificed in hopes of improving their lives.
B. More importantly I realized, how much the settlers sacrificed in hopes of improving their lives.
C. More importantly I realized how much, the settlers sacrificed in hopes of improving their lives.
D. More importantly I realized how much the settlers sacrificed, in hopes of improving their lives.

Read Sentence 12.

*Some days a gentle breeze cooled my face, providing encouragement to continue.*

Which underlined word is spelled incorrectly?

F. gentle
G. providing
H. encouragement
J. continue
A student wrote the following letter. It contains mistakes. Read the letter and answer Numbers 9 through 13.

January 28, 2009
Shop of Shirts
Suite 401
10999 Westview Drive
Phoenix, Arizona 34521

To whom it may concern:

(1) Our student library group placed an order with you for 34 T-shirts on December 17, 2008. (2) When we placed the order, they told them that delivery would take 2 to 4 weeks. (3) After 6 weeks of waiting, however, we still have not received the T-shirts we ordered.

(4) The shirts were pictured on page 34 of your November 2008 catalog. (5) The shirts were red with a picture of an open book on the front and the words “Readers are Leaders” printed on the back. (6) We also paid extra money to have added underneath the picture the name of our school on the front. (7) Enclosed is a copy of the page from the catalog with the T-shirt we ordered circled in blue so that you can easily identify the style.

(8) We would like to know when our order will arrive the order confirmation number is #BN-439. (9) We hope that once you determine the problem, your company will be able to rush the order so we will have the shirts in time for our library groups yearly picture. (10) We looks forward to hearing from you.

Sincerely,
Cindy Mayer
Read Sentences 1 and 2.

Our student library group placed an order with you for 34 T-shirts on December 17, 2008. When we placed the order, they told them that delivery would take 2 to 4 weeks.

How should the underlined part of this sentence be revised to have correct pronoun agreement?

A  they told us
B  you told him
C  we were told
D  she told them
10 Read Sentence 9.

> We hope that once you determine the problem, your company will be able to rush the order so we will have the shirts in time for our library groups yearly picture.

What is the correct way to write the underlined words?

F our library group’s yearly picture  
G our library groups’ yearly picture  
H our library’s groups’s yearly picture  
J our libraries group yearly picture
<table>
<thead>
<tr>
<th>Reporting Category:</th>
<th>1 Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Indicator:</td>
<td>0601.1.2 Identify the correct use of verbs (i.e., action, linking, regular/irregular, agreement) within context.</td>
</tr>
</tbody>
</table>

11 Read Sentence 10.

*We looks forward to hearing from you.*

What is the correct way to write the underlined word?

A is looking  
B look  
C are look  
D looked
Reporting Category: 1 Language

Performance Indicator: 0601.1.4 Identify the correct use of prepositional phrases (place prepositional phrases correctly according to the words they modify within the sentence) within context.

12 Read Sentence 6.

*We also paid extra money to have added underneath the picture the name of our school on the front.*

What is the best way to write Sentence 6?

F  We also paid extra money to have the name added of our school on the front underneath the picture.

G  We also paid extra money to have the name of our school added underneath the picture on the front.

H  We also paid extra money to have on the front the name of our school added underneath the picture.

J  We also paid extra money to have underneath the picture added the name of our school on the front.
We would like to know when our order will arrive the order confirmation number is #BN-439.

What is the best way to correct this run-on sentence?

A. We would like to know when our order will arrive, the order confirmation number is #BN-439.

B. We would like to know when our order will arrive; the order confirmation number is #BN-439.

C. We would like to know when our order will arrive, but the order confirmation number is #BN-439.

D. We would like to know when our order will arrive; however the order confirmation number is #BN-439.
Talking Drums

Good morning, friends. As you may remember, Mr. Kovier began the year by teaching us about the different families of instruments. Many of you already know what my favorite instrument group is—the percussion family. When I was asked to speak to you, I couldn’t wait to share what I have learned from my father at his African drum school.

I have always been fascinated by people playing the drums. As a little kid, I liked to watch parades and football games on TV so that I could see the drummers in the marching bands. While my father was teaching percussion at Southeast College, our family had the opportunity to travel to the country of Guinea. Before that trip, I did not realize that other kinds of drums existed. In the month I spent in Guinea, I saw the Malinke people play their beautiful drums. My father learned to play them, and then he taught me. When we returned home, my father opened his own African drum school called Talking Drums.

At my father’s school, we use genuine African dun dun drums. These drums are actually a set of three bass drums that create unique sounds when struck. Many of these drums are carved from dense wood. Then they are skillfully painted with beautiful designs. We also have smaller hand drums called djembes. Using both of these instruments, we play some of Africa’s most energetic and popular music. In addition to learning how to play them, students in the classes also learn how these drums are made. Eventually students get to help make a drum of their own.

Learning to play the different drumbeats can be difficult in the beginning. First a student must learn to strike a steady beat on the drum while holding it. As I have learned more difficult rhythms, my father has taught me about the history of the music. People in our community can learn about West African music and how to play these drums because trained drummers, such as my father, have been able to travel, perform, and teach in many areas of the United States.

Occasionally we have teachers from West Africa who visit our drum school. These teachers are masters of djembe drumming and show us their unique skills. During these visits, other students and I demonstrate what we have learned for our special guests. We also have opportunities to perform at the annual cultural festival, the fall parade, and at local elementary schools.

Since my father opened Talking Drums, I have learned that there are many groups like ours around the United States. Kids in Illinois, California, and New York are also learning to play the African drums. If the rhythm of music keeps your feet tapping like mine, I encourage you to take an introductory class at the drum school. You may find yourself with a new favorite musical instrument!
Read this sentence from Paragraph 4.

First a student must learn to strike a steady beat on the drum while holding it.

Which meaning of strike is used in the sentence above?

F  to take a certain course
G  to delete something
H  to discover something
J  to come into contact with
Read this sentence from Paragraph 3.

Then they are **skillfully** painted with beautiful designs.

What does **skillfully** mean in this sentence?

A. able to study
B. acting in a manner requiring ability
C. able to care for
D. not having the ability to do

What is the main purpose of this speech?

F. to explain to the audience the appeal of percussion instruments
G. to persuade the audience to research African music
H. to describe to the audience the appearance of Malinke drums
J. to inform the audience about a special music school
Reporting Category: 4 Communication and Media

Performance Indicator: 0601.2.2 Identify the targeted audience of a speech.

17 Who is the intended audience for this speech?
   A drummers at Talking Drums
   B teachers visiting from West Africa
   C friends attending Southeast College
   D students in Mr. Kovier’s music class

Reporting Category: 4 Communication and Media

Performance Indicator: 0601.2.3 Identify the thesis and main points of a speech.

18 Which sentence from the speech best expresses its intended thesis?
   F When I was asked to speak to you, I couldn’t wait to share what I have learned from my father at his African drum school.
   G When we returned home, my father opened his own African drum school called Talking Drums.
   H Occasionally we have teachers from West Africa who visit our drum school.
   J You may find yourself with a new favorite musical instrument!
Which sentence best summarizes the speech?

A  Talking Drums is a music school that teaches its students the music, history, and culture of West African drumming.
B  Master teachers from West Africa visit the United States to demonstrate their unique skills for students.
C  Drummers who have learned special skills and difficult rhythms play *djembes* and *dun dun* drums.
D  A student who has learned about West African drumming shares facts about a drum school called Talking Drums.

Which sentence from the speech is an opinion?

F  As you may remember, Mr. Kovier began the year by teaching us about the different families of instruments.
G  Before that trip, I did not realize that other kinds of drums existed.
H  These drums are actually a set of three bass drums that create unique sounds when struck.
J  Learning to play the different drumbeats can be difficult in the beginning.
21 Read this sentence from Paragraph 6.

If the rhythm of music keeps your feet tapping like mine, I encourage you to take an introductory class at the drum school.

Which persuasive device is the speaker using with this sentence?

A bandwagon  
B loaded terms  
C testimonial  
D name-calling

22 Read the analogy based on the speech.

Drum is to instrument as concert is to ________.

Which word best completes the analogy?

F performance  
G audience  
H music  
J skill
After the speech, the speaker wants to give each person in the audience something to remember Talking Drums. Which of these would be best for the speaker to give?

A  an outline of the types of drums used at the school
B  an article from a local newspaper about a recent visiting teacher
C  a flier with the location and schedule of classes
D  a photograph of a group of drummers from the school
Directions

Don wrote the following report. It contains mistakes. Read the report and answer Numbers 24 through 37.

1. Most schools take pictures of students each year to put in yearbooks. Photographers make the whole process of taking and developing pictures look effortless. It is easy to forget that when photographs were first invented, the process wasn’t easy, but fortunately, much has changed since then.

2. The first photograph was taken in the late 1820s. At that time, each sheet of metal, used as film, would record only one image. Then the material used to create that image took a long time to develop into a picture. ________, the process of taking out the film and putting in a new piece took a long time.

3. Today, the newest cameras don’t even use film. These cameras are called digital cameras, and they use computer technology to capture an image or scene. With technology changing at such a fast pace, it is impossible to think what photography will be like in the next 100 years.

4. In the early 1890s, a man named George Eastman invented roll film. Roll film allowed people to take many pictures. However, there was still no camera that could quickly take pictures one right after another. Fortunately in the early 1890s, Thomas Edison, with the help of William Dickson, invented a new camera that could take over 40 pictures in one second. Many pictures for a yearbook can be taken on one roll of film. When shown from a special projector, the images from this motion-picture camera looked as though they were moving.
The purpose of this report is to

- **F** persuade the reader to try photography.
- **G** explain why people enjoy photography.
- **H** inform the reader about photography.
- **J** describe how people use photography.

Who would most likely read Don’s report?

- **A** adults learning new photography techniques
- **B** people interested in the history of photography
- **C** children who like taking numerous photographs
- **D** people who teach photography in art classes
26 Which sentence from the report is the thesis statement?

F Photographers make the whole process of taking and developing pictures look effortless.

G It is easy to forget that when photographs were first invented, the process wasn’t easy, but fortunately, much has changed since then.

H With technology changing at such a fast pace, it is impossible to think what photography will be like in the next 100 years.

J Roll film allowed people to take many pictures.

27 Choose the most logical order for the paragraphs in Don’s report.

A 2, 3, 4, 1

B 1, 4, 3, 2

C 1, 2, 4, 3

D correct as is
Don wrote the following facts after reading an article in a photography magazine.

1. Photography is a hobby for many people.
2. Joseph Niépce took the first photograph.
3. Flashbulbs were often needed while taking photographs.
4. Frederick Wratten started the first photography supply business.

Which fact would best support an idea presented in Don’s report?

F  Fact 1
G  Fact 2
H  Fact 3
J  Fact 4

Don wants to add this sentence to his report.

Most photographs can be printed at stores or at home in just minutes.

In which paragraph should Don include this sentence?

A  Paragraph 1
B  Paragraph 2
C  Paragraph 3
D  Paragraph 4
30 Which sentence from Paragraph 4 does not belong in the report?

F In the early 1890s, a man named George Eastman invented roll film.
G However, there was still no camera that could quickly take pictures one right after another.
H Many pictures for a yearbook can be taken on one roll of film.
J When shown from a special projector, the images from this motion-picture camera looked as though they were moving.

31 Read these sentences from Paragraph 2.

At that time, each sheet of metal, used as film, would record only one image. Then the material used to create that image took a long time to develop into a picture. ________, the process of taking out the film and putting in a new piece took a long time.

Which transition word best belongs in the blank?

A First
B Therefore
C However
D Additionally
32 Which of these is the best concluding sentence for Paragraph 4?

F Photography continues to change as inventors find better ways to record images and movies.

G Many people today still enjoy using old cameras to take their family photographs.

H A camera able to take 40 pictures per second is useful only if a special projector is available to show the images.

J Although modern cameras may look different, they still work like those invented much earlier.

33 Which title would be best for Don’s report?

A Early Photography

B The Invention of Photography

C Photography Today

D Photography Then and Now
Look at the graphic organizer.

Changes in Photography Since 1827

Roll film  Motion-picture camera  

Which information belongs in the empty space?

F  George Eastman
G  Special photo paper
H  Digital cameras
J  Yearbook pictures
35 Don wants to learn more about digital photography. For an Internet search, which phrase would provide the most focused search for Don?

A  early cameras  
B  changes in camera technology  
C  history of film  
D  techniques for taking electronic images

36 For his report, Don needed to include at least one primary source. Which of Don’s sources is a primary source?

F  an encyclopedia article on roll film  
G  a biography of Thomas Edison  
H  a copy of George Eastman’s journal  
J  a Web site about the invention of digital cameras
Don made the following notes after reading a source about Thomas Edison’s invention of a new camera.

1. It had continuous tape-like film.
2. It could project motion pictures.
3. He received 1,093 U.S. patents throughout his career as an inventor.
4. He worked on a camera with William Dickson from 1888–1893.

Which fact is not relevant to Don’s report?

A  Fact 1
B  Fact 2
C  Fact 3
D  Fact 4
Milk Jug Lumber
by Jae O. Haroldsen

1 In March 1987, a tugboat pulled a barge loaded with garbage from New York City down the eastern seaboard. No state would let it dock. Why? There was too much garbage and too little landfill space. Landfills were already spilling over with plastics.

2 Scientists started looking for new ways to recycle trash, especially plastics.

3 Dr. Tom Nosker, a scientist at Rutgers University, says, “We asked the public for empty soda bottles.” People sent not only soda bottles but milk jugs, detergent containers, plastic cups, and more.

A Mixed Bag

4 Dr. Nosker let other scientists take the soda bottles. “The rest contained about eighty percent milk jugs and detergent bottles,” he says. “Twenty percent was a jumble of different plastics.” Dr. Nosker started to melt down a mix of plastics.

5 Each type of plastic melts at a different temperature, so not everything in the mix melted. Little pieces floated in the taffy-like mix. “I forced the mix into molds shaped like rectangles and circles,” he says.

6 When the mix cooled, Dr. Nosker drilled a hole into it and turned in a screw. He wondered, could mixed plastics be made into a substitute for wood?

Why Milk Jugs?

7 Wood makes a good building material because it is strong (holds weight) and stiff (doesn’t crumple). There is no single type of plastic that is both strong and stiff.

8 Milk jugs are strong. (Try tearing one.) Milk jugs are not stiff. (Crush one.) Plastic forks are stiff but not strong.

9 Dr. Nosker looked at the floating pieces. He had an idea. He needed the right mix of milk jugs and plastic forks.
After Dr. Nosker washed and sorted the plastics, he melted each type of plastic separately. He began mixing milk jugs and plastic forks (and spoons and knives) in different amounts, testing each batch’s strength and stiffness. In time, he produced a lumber matching the strength and stiffness of wood. In the mid-1990s, Dr. Nosker’s plastic lumber first appeared for building fences, decks, playgrounds, and picnic tables.

Today, recycled plastic is being used for railroad ties and even a forest-service bridge. Think of it. One of your drained milk jugs may be supporting a heavy freight train or fire truck rolling toward a forest fire!

In the future, Dr. Nosker thinks larger bridges or artificial bone may be made from recycled plastics. He is still mixing.


Reporting Category: 2 Vocabulary
Performance Indicator: 0601.1.19 Recognize and use grade-appropriate and content-specific vocabulary within context.

Read this sentence from Paragraph 6.

He wondered, could mixed plastics be made into a substitute for wood?

What does the word substitute mean?

F a strong material used for building
G one thing used in place of another
H something that has been recycled
J a new way of doing something
Terry did an Internet search to learn more about the uses for recycled plastics. Read his results.

1. Recycling Plastics
   The easiest ways to recycle and help the environment . . .
   www.#1easyrecycle.com

2. Recycled Crafts
   Fun ways to use plastic bottles to make recycled gifts and crafts . . .
   www.fun*recycled*crafts.com

   . . . a government agency that studies uses for recycled plastic wastes . . .
   www.USrecycling.gov

4. Going Green with Recycling
   . . . list of ways you can help recycle plastic and paper in everyday life . . .
   www.gogreenalltheway.org

Which Internet site would provide Terry with the most reliable information for his search?

A  Site 1
B  Site 2
C  Site 3
D  Site 4
Leah wants to know the rules for recycling plastic bottles in the northeastern United States. Which source would have the best information?

- F a U.S. government Web site on recycling plastic bottles in the United States
- G a television commercial about recycling plastic bottles
- H a social studies textbook chapter on recycling plastic in the Northeast
- J a magazine advertisement for recycling plastics

In his work, Dr. Nosker used both milk jugs and plastic forks because

- A there were too few soda bottles and plastic cups for him to use.
- B both plastic items could hold weight without falling apart.
- C these were the only plastics that could be recycled.
- D he wanted to make a plastic that was both strong and stiff.
Which question is answered in the section “Why Milk Jugs?”

F  How many mixtures did Dr. Nosker try before finding the right one?
G  How are plastics melted down into liquid?
H  What materials are used to create plastic milk jugs?
J  What benefits did plastics in milk jugs and forks have for Dr. Nosker?

Which of these was a problem for Dr. Nosker when he melted down a mix of plastics?

A  Everything melted too quickly.
B  None of the plastic was strong.
C  He did not receive enough donated plastic.
D  Each plastic melted at a different temperature.
According to the passage, Dr. Nosker began to solve his **main** problem by

- **F** using eighty percent milk jugs and detergent bottles.
- **G** testing plastic forks to find out how strong they were.
- **H** mixing different types of plastic in different amounts.
- **J** trying to build a small bridge from his melted plastics.

The caption beneath the second photograph helps readers to understand

- **A** the best way to treat recycled plastic for durability.
- **B** how sturdy recycled plastic lumber can be.
- **C** the many uses for recycled plastic.
- **D** what recycled plastic lumber looks like.
Clayton filled out the chart below before he read this passage.

<table>
<thead>
<tr>
<th>What I KNOW</th>
<th>What I WANT to learn</th>
<th>What I did LEARN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recycling is good.</td>
<td>1. At what temperature would a milk jug melt?</td>
<td>1.</td>
</tr>
<tr>
<td>2. Many people recycle plastic.</td>
<td>2. Is a milk jug strong or stiff?</td>
<td>2.</td>
</tr>
</tbody>
</table>

Which of these statements could be placed in the column “What I did LEARN”?

- **F**  Most types of plastic are stronger than wood.
- **G**  Soda bottles were useful in Dr. Nosker’s research.
- **H**  Different types of plastics melt at different temperatures.
- **J**  Dr. Nosker used one type of plastic to make the new lumber.
47. Which detail from the passage best shows that Dr. Nosker accomplished his goal of producing a strong, stiff recycled plastic?

A. Today there is a forest-service bridge made of recycled plastic.
B. Dr. Nosker melted different kinds of plastic to make lumber.
C. In the future, Dr. Nosker hopes to make artificial bone.
D. Because of its strength, wood makes a good building material.

48. Which sentence best summarizes this passage?

F. Many scientists were looking for new ways to recycle trash, so Dr. Tom Nosker used old items to make different objects.
G. Dr. Tom Nosker experimented with different mixtures of melted plastics until he came up with a building material as strong as wood.
H. Since plastic can be as strong as wood, Dr. Tom Nosker decided to make things like fences and tables from it.
J. Dr. Tom Nosker asked for empty plastic containers to use for his experiment.
Roberto is giving a speech based on the information in this passage. Which of these would be best for him to show the audience at the end of his speech?

A  a magazine article about a garbage barge
B  a selection of milk jugs and plastic forks
C  a photograph of a school playground
D  a small chair made from plastic lumber
Directions

Read the poem. Then answer Numbers 50 through 60.

In the Ebony Room

by Isaac Olaleye

In my classroom
We study by sunlight.
But when the wind whistles,
And the clouds hurry in front of the sun,

The trees bow.
Leaves flutter,
And the pages of our books
Begin flipping by themselves,
And the clouds are full of rain.

Then the wooden windows
Of my classroom
Are pulled shut.

In the ebony dark room
Grinning students whisper
How wonderful it is
Not to have to do their
Arithmetic, reading, and writing.
The whispering fades.
On wooden desks students rest their heads.

On wooden tables teachers rest their heads.
For in the ebony room
The rain sings
A lullaby to students and teachers.

The pit-a-pat of the rain
On the wooden windowpanes
And the whistling wind
Get louder.
Pupils wake up and sing:
“Stop, rain, stop.

We cannot play on green grass.
We cannot go home to our parents.
Stop, rain, stop.
Come back another day.”
But the rain, with a mind of its own,
Beats against our wooden windows.
And pit-a-pat we hear it say:
“I have a rain forest to fill
And grass to keep green!
I will rain till I’m through.

Children can wait.
My music will not.”
So in the dark room we nod and doze
To the rain’s lullaby.

“In the Ebony Room” from The Distant Talking Drum, by Isaac Olaleye, copyright © 1995 by Boyds Mills Press, Inc. Used by permission.

**Reporting Category:** 2 Vocabulary

**Performance Indicator:** 0601.1.14 Select appropriate synonyms, antonyms, and homonyms within context.

Read Line 42.

*So in the dark room we nod and doze*

Which of these means the same as **doze**?

F. learn
G. sleep
H. agree
J. move

Go On ➤
Why do the students become less excited about missing lessons?

A  The students are eager to sing to the rain.
B  The students and teachers get sleepy.
C  The students want to see the leaves flutter.
D  The students and teachers listen to the rain talk.
Look at the graphic organizer.

The sun shines. → The children study. → The rain comes. → The windows close.

The people become tired.

Which event belongs in the empty box?

F. The trees bow.
G. The clouds hurry.
H. The leaves flutter.
J. The children whisper.

How does the speaker of the poem feel about the storm?

A. disappointed when the storm interrupts study time
B. fearful of the noise made by the storm
C. excited when the storm continues past the time to go home
D. content to let the storm do its work
The speaker of the poem hints that the classroom has no
F  electrical power.
G  desks.
H  teaching materials.
J  windows.

Which line from the poem shows that it is written in first person?
A  In my classroom
B  Begin flipping by themselves,
C  Grinning students whisper
D  Not to have to do their
In the poem, students are in conflict with

- F the need for technology.
- G their boredom.
- H the forces of nature.
- J their teachers.

What is the implied theme of this poem?

- A People should work together to complete difficult tasks.
- B Effort is required to maintain focus and determination.
- C A prepared person can overcome any challenge.
- D Nature can disrupt planned events and activities.
But the rain, with a mind of its own,
Beats against our wooden windows.
And pit-a-pat we hear it say:
“I have a rain forest to fill
And grass to keep green!
I will rain till I’m through.

In these lines, the author uses personification to indicate that the

- **F** rain is more powerful than anything experienced before.
- **G** windows of the school are similar to the rain.
- **H** rain has desires and feelings of its own.
- **J** sound of the rain creates its own melody.
59. Read Lines 19 and 20.

On wooden desks students rest their heads.
On wooden tables teachers rest their heads.

These lines show an example of which sound device?

A. accent  
B. repetition  
C. rhyme  
D. onomatopoeia

60. The author wrote this poem most likely to

F. share a pleasant memory.  
G. explain what schools are like.  
H. express the importance of education.  
J. inform about a different kind of school.
Rupert Jackson Wilkey stood next to his tall, silent grandmother and watched his parents drive off, leaving him behind. The old station wagon disappeared down the dark gravel road. The road vanished into a mass of trees, mostly pines.

Those pine trees, with their pointy tops, looked like huge green teeth poking into the blue sky. Rupert felt as if the city home he loved had been swallowed up by the toothy trees standing prickly and tall all about him. Everything felt big and strange.

Rupert looked up at his grandmother. She looked down at him. Her skin was the color of pecan shells, just a little lighter than his own. Her hair was black and white, as if it couldn’t decide which color it wanted to be. Curls hugged her head like a tightly knit winter hat.

“You don’t talk much, Nanna,” Rupert said.

“You don’t visit much, Rupert,” his grandmother replied.

They stood staring at each other. No one else called him anything but Jackson, even though Rupert was his real first name.

“Come with me, Rupert,” said Nanna. She started walking without looking back.

Rupert followed her to a large shed behind her home. The shed had a roof that extended past the end of the building to keep the firewood dry.

Rupert remembered his last visit to Nanna’s. He had sat with his sister under that roof on a pile of stacked wood. Together they had watched as rain and hail beat up the ground, turning the whole yard into a puzzle of tiny puddles.

But now Sissy needed an operation, and Rupert had to stay here alone for a few days.

“You coming?” Nanna’s voice sounded muffled. Her words were coming from inside the shed.

Rupert went inside. The shed was filled with all sorts of odds and ends. He could see his grandmother in the far corner. Rupert walked over and stood next to her. She pointed to a small wooden cupboard with “Rupert” painted on it in bright-green letters.
“Yours,” she said.

Rupert knelt down and opened the two drawers. Empty. He opened the two doors and saw two empty shelves. The whole cupboard was empty. He looked up at Nanna, not understanding.

“It’s yours to fill,” she said. “The cupboard stays here, but it belongs to you. No one else. Come along, now.”

Rupert closed the cupboard doors and followed Nanna, wondering what would happen next. She took him down a path that meandered through the woods. The path led to a clearing by a small pond. His grandmother kind of folded up her tallness and sat on a log. She looked at Rupert.

“Look and listen” was all she said.

Then she closed her eyes and smiled. Her smile reminded Rupert of his mother.

Rupert walked around slowly, looking and listening. A whiff of something sweet tickled his nose, and he started sniffing, too. He walked up to a pine tree just his height and stuck his face into its branches. He sniffed. It smelled like the bathroom cleanser his mom used, but fresher.

Rupert started picking up pinecones and putting them in his pockets. He found five oddly shaped rocks. His pockets became heavy. Near the pond’s edge, Rupert saw tiny V shapes in the wet sand and wondered about them. He found a bright blue feather and took it over to Nanna. She opened her eyes.

“Blue Jay,” she said.

He held out a pinecone.

“Jack pine.”

He pulled a different pinecone out of his pocket.

“White pine.”

Nanna looked at his bulging pockets. “Rupert, maybe it’s time to start filling your cupboard?”

Rupert felt his face stretch into a smile. He twirled around, looking at the big, wild world he could explore. The pine trees no longer looked like dark-green teeth. Nanna no longer seemed strange and silent.

“I may be so predisposed,” Rupert answered, carefully pronouncing the familiar phrase.

Nanna laughed out loud. “How did that eight-year-old brain of yours find its way around a big word like ‘predisposed’?”

“It’s my dad’s favorite word,” Rupert replied.

“Mmmm” was all Nanna said.

The two of them began walking back toward the shed.

“Why do you call me Rupert, Nanna?”

“It’s your name. It was my husband’s name. I like the way it feels on my tongue.”

“Mmmm,” Rupert said, shyly imitating his grandmother’s hum.

Go On
Nanna looked down at him and smiled. Her smile again reminded Rupert of his mother. Without thinking, he reached up and took Nanna’s hand as they walked. Rupert’s hand felt small and safe inside his grandmother’s.

“I expect,” Rupert said, “you might be predisposed to like someone who has the same name as your husband?”

“I expect,” Nanna said.

“Nanna, I might need more than one visit to fill my cupboard.”

“I expect,” Nanna said again.


**Reporting Category:** 2 Vocabulary

**Performance Indicator:** 0601.1.16 Use context clues and prior knowledge of roots and affixes to determine the meaning of unfamiliar words.

61 Read this sentence from Paragraph 37.

“I expect,” Rupert said, “you might be **predisposed** to like someone who has the same name as your husband?”

The word **predisposed** means to

A. get rid of something in advance.
B. describe in advance what will happen.
C. make a decision in advance.
D. occur in advance of a particular event.
62. Read the dictionary entry for meander.

me·an·der (noun) 1. a winding path or course 2. a turn in a stream (intransitive verb) 3. to follow a winding path or course 4. to wander slowly

Now read this sentence from Paragraph 16.

*She took him down a path that meandered through the woods.*

What is the meaning of meandered as it is used in the sentence above?

- F a winding path or course
- G a turn in a stream
- H to follow a winding path or course
- J to wander slowly

63. The reader can predict that Rupert and Nanna will

- A continue to struggle with their relationship.
- B quickly grow apart.
- C gain a better understanding of each other.
- D spend more time indoors.
Read Paragraphs 26 and 27.

Nanna looked at his bulging pockets. “Rupert, maybe it’s time to start filling your cupboard?”

Rupert felt his face stretch into a smile. He twirled around, looking at the big, wild world he could explore. The pine trees no longer looked like dark-green teeth. Nanna no longer seemed strange and silent.

Why does Rupert smile at this point in the story?

F He wants Nanna to feel better.
G He realizes things will be fine.
H He knows Nanna is teasing him.
J He knows it is time to go home.

How does Rupert most likely feel as he begins his walk with his grandmother?

A curious
B delighted
C relaxed
D concerned
“The Cupboard” can best be described as

F  historical fiction.
G  a drama.
H  a biography.
J  realistic fiction.

How does the setting emphasize Rupert’s internal conflict in the story?

A  It is the reason he is at his grandmother’s house.
B  It makes him feel alone and isolated.
C  It provides a new and unique experience for him.
D  It brings out his grandmother’s true character.
How do pinecones, rocks, and feathers affect Rupert’s attitude?

- **F** They help him appreciate the area around Nanna’s house.
- **G** They make him homesick for the city where he lives.
- **H** They interest him and make him want to read about each object.
- **J** They fill his pockets and make him want to hurry inside to store them.

Read this sentence from Paragraph 2.

Those pine trees, with their pointy tops, looked like huge green teeth poking into the blue sky.

The author uses the simile in this sentence to

- **A** make the trees seem taller than they are.
- **B** emphasize Rupert’s scared feelings.
- **C** make the trees seem as if they are real.
- **D** compare Rupert’s home to Nanna’s home.
Directions

Read and answer Numbers 70 through 87.

Reporting Category: 1 Language

Performance Indicator: 0601.1.5 Identify the correct use of conjunctions (i.e., coordinating and subordinating) and interjections within context.

70 Which sentence correctly uses a subordinate conjunction?

F Even though her room was such a mess, Carmen’s mother told her she couldn’t visit her friend until it was clean.

G Craig looked on top of his bookshelf, whereas his pet hamster likes to hide when it has escaped its cage.

H Even if I baby-sit every Saturday for the next month, I still won’t have enough money to buy the new video game.

J Louisa will do her homework while her brother has finished practicing his trumpet for his upcoming concert.
71 Which of these uses a colon correctly?

A. I put the following in my bag: a sandwich, a cookie, and an apple.
B. Cassidy won: a second-place trophy at the race on Saturday.
C. Teachers usually bring home: lesson plans and textbooks.
D. David’s coach: said we will practice next Thursday.

72 Read this sentence.

I could not open my locker my sweater was caught in the hinge.

What is the correct way to revise this run-on sentence?

F. I could not open my locker because my sweater was caught in the hinge.
G. I could not open my locker though my sweater was caught in the hinge.
H. I could not open my locker, so my sweater was caught in the hinge.
J. I could not open my locker, my sweater was caught in the hinge.
Read the sentence below.

“_______, now I understand this math problem,” Clara said, nodding her head at her teacher.

Which word best completes the sentence?

A  Ah
B  Wow
C  Oops
D  Ouch

A sixth grade student was asked to complete a science project with a partner. What is the best way for the students to proceed?

F  The student with less homework should do the work.
G  The student who is better at science should do the work.
H  The pair should have equal tasks in completing the work.
J  The pair should play a game to determine who does the work.
Reporting Category: 4 Communication and Media
Performance Indicator: 0601.2.4 Select the most appropriate behaviors for participating productively in a team (e.g., contribute appropriate and useful information and ideas, understand the purpose for working as a team, understand the responsibilities of various roles within the team).

75 A group of students is assigned to complete a project. What does the group need to do first to make the project successful?

A contribute useful ideas about the assignment
B understand the goal of the assignment
C compare the results of the team to those of other teams
D understand the roles that each team member will have

Reporting Category: 4 Communication and Media
Performance Indicator: 0601.2.5 Identify the functions and responsibilities of individual roles within an organized group (i.e., reporter, recorder, information gatherer, leader, timekeeper).

76 Which member in a group is responsible for making sure that enough attention is given to all the parts of a project in order to meet the due date?

F information gatherer
G recorder
H reporter
J leader
If you are giving a speech and the audience does not appear to be listening, which of these should you do?

A  Change your topic.
B  Speak loudly and clearly.
C  Read from your note cards.
D  Sit down and try again later.

Serena is giving a presentation to the school board. Read her outline.

1. description of the existing bus routes
2. list of necessary changes to the current bus routes
3. list of problems caused by the use of current bus routes
4. description of how changes to the existing bus routes will benefit students

Which would be the best order for Serena to use for her presentation?

F  4, 2, 1, 3
G  1, 3, 2, 4
H  2, 3, 1, 4
J  3, 4, 1, 2
79 Mia wants to present a suggestion to her supervisor at work for the purchase of a new copy machine. Which format would be the most appropriate for her to use?

A a set of directions for using the new device
B a memo sent out to the entire department at her work
C an oral discussion after work one afternoon
D an e-mail with a Web site link to the new product

80 If a cable television service uses a claim from a satisfied customer in its advertisements, which type of persuasive device is it using?

F bandwagon
G loaded terms
H name-calling
J testimonial
Read these instructions on how to make a snow scene in a jar.

Instructions

1. Use the hot glue gun to glue the lid onto the jar.
2. Put some glitter into the jar.
3. Fill the jar with water and add food coloring if desired.
4. With an adult’s help, use a hot glue gun to glue the rocks and plastic animal to the inside of the jar lid and let dry.
5. Get a clean baby-food jar with a lid, some small rocks, and a small plastic animal.
6. Shake the jar to make it snow!

What is the correct order for this project?

A  5, 4, 3, 2, 1, 6
B  2, 4, 1, 3, 5, 6
C  5, 2, 4, 3, 1, 6
D  4, 1, 2, 3, 5, 6
Melissa is giving a presentation to persuade students that CPR (cardiopulmonary resuscitation) is an important skill to know. Which of these would best reinforce her viewpoint?

- F an original photograph of the person who invented CPR
- G a diagram explaining the parts of the emergency room
- H an illustration of the heart and the circulatory system
- J a chart showing the number of lives saved by CPR

Most 20-second television commercials for food products are designed to

- A describe.
- B entertain.
- C inform.
- D persuade.
Look at the photo.

From this photo, a viewer can conclude that the children

- **F** enjoy traveling to different cities to dance.
- **G** have never done this dance before.
- **H** are in the United States.
- **J** are performing at a festival.

Go On ▶
A farmers’ market plans to use this photo in an advertisement. What message are the farmers most likely trying to communicate with this photo?

A  Their prices are comparable to supermarket prices.
B  They offer a variety of fresh produce.
C  They handpick all of the vegetables.
D  Their produce is grown on land nearby.
Identify the type of conflict represented in the picture.

F  person vs. environment
G  person vs. person
H  person vs. technology
J  person vs. self
Read the poem “If You Think You Are Beaten” by Walter D. Wintle.

If you think you are beaten, you are.  
If you think you dare not, you don’t.  
If you’d like to win but think you can’t,  
It’s almost certain you won’t.

Life’s battles don’t always go  
To the stronger or faster man,  
But sooner or later, the man who wins  
Is the man who thinks he can.

What is the rhyme pattern of this poem?

A  aabb  
B  abcb  
C  abab  
D  abba
1 The ages of people at a baseball game are shown in the graph.

About 10,000 people are at the baseball game. Based on the information in the graph, what is the closest prediction of the number of people at the baseball game who are 30 years old or younger?

A 1,000
B 1,300
C 2,300
D 3,200
2. Jordan placed 846 photographs into 12 photo albums. She put about the same number of photographs in each album. Which is the best estimate of the number of photographs Jordan put in each album?

- F 40
- G 45
- H 55
- J 70

3. The temperature at 3:00 P.M. was 65°F. By 9:00 P.M., the temperature had decreased by 27 degrees. Which integer best represents the temperature change, in degrees Fahrenheit, from 3:00 P.M. to 9:00 P.M.?

- A −38
- B −27
- C 27
- D 38
Which equation below represents the commutative property?

F \(3 + (4 + 6) = 3 + (6 + 2 + 2)\)

G \(3 \cdot 4 \cdot b = 3 \cdot b \cdot 4\)

H \(3 + (4 + 6) = (3 + 4) + 6\)

J \(3(4 + 6) - 3 \cdot 4 + 3 \cdot 6\)
5. Look at the key below.

Which model below represents \(2x + 3\)?
Roberto is making cookies using a recipe. He will use $\frac{1}{2}$ of every measurement listed in the recipe. If the recipe requires $\frac{3}{4}$ cup of water, how much water should Roberto use? 

F $\frac{3}{2}$ cups  
G $\frac{2}{3}$ cup  
H $\frac{1}{2}$ cup  
J $\frac{3}{8}$ cup
Reporting Category: 2 Number and Operations
Performance Indicator: 0606.2.2 Solve problems involving the addition, subtraction, multiplication, and division of mixed numbers.

7. A recipe for 1 cake requires \(1\frac{3}{4}\) cups of water. How many cups of water are required to make 5 cakes using this recipe?

A. \(8\frac{3}{4}\) cups
B. \(6\frac{3}{4}\) cups
C. \(5\frac{3}{4}\) cups
D. \(3\frac{1}{4}\) cups

---

Reporting Category: 2 Number and Operations
Performance Indicator: 0606.2.3 Solve problems involving the addition, subtraction, multiplication, and division of decimals.

8. Danielle had $33.58. She spent $19.99 of this money on art supplies. How much money should Danielle have left?

F. $53.57
G. $26.41
H. $14.58
J. $13.59
9 Coretta made 7 pies for a family reunion. During the reunion, \( \frac{3}{4} \) of the pies were eaten. Coretta took \( \frac{1}{2} \) pies to work for her friends. How many pies were left?

A \( 2 \frac{1}{4} \)  
B \( 2 \frac{2}{3} \)  
C \( 4 \frac{3}{4} \)  
D \( 5 \frac{1}{2} \)

10 Ivan had $28.50 saved for gardening supplies. He spent $13.75 for plants and $6.99 for plant food. He wants to spend $15.99 on flower bulbs. Based on the amount he has left, how much more money will he need?

F $7.76  
G $8.23  
H $20.74  
J $23.75
Mr. Kincaid has a piece of pipe that is 3.08 meters long. Which length is equivalent to 3.08 meters?

A  \( \frac{3}{25} \) meters

B  \( \frac{3}{4} \) meters

C  \( \frac{3}{5} \) meters

D  \( \frac{4}{5} \) meters

Joey solves math problems at a rate of about 3 problems every 7 minutes. He continues to work at the same rate. How many minutes should Joey take to solve 45 math problems?

F  15 minutes

G  21 minutes

H  105 minutes

J  135 minutes
13. The area of the floor in Rogelio’s family room is 400 square feet. A rug covers 80 square feet of the floor. What percent of the family room floor is covered by the rug?

A. 5%
B. 20%
C. 50%
D. 80%

14. Which number line shows Point R located closest to 2.85?

F. 

G. 

H. 

J. 

Go On ▶
Mollie discovered a fossil at 24 feet below sea level. Which number line best shows Point $M$ at $-24$?
The list below shows the items Seth bought at a grocery store.

- 1 gallon of milk for $3.88
- 1 loaf of bread for $1.99
- 1 dozen eggs for $1.59

He paid for these items with a $10 bill. Which equation could be used to find \( c \), the total amount of change, in dollars, Seth should receive?

- **F** \( c = 10 - (3.88 \times 1.99 \times 1.59) \)
- **G** \( c = 10 + (3.88 + 1.99 + 1.59) \)
- **H** \( c = 10 + (3.88 - 1.99 - 1.59) \)
- **J** \( c = 10 - (3.88 + 1.99 + 1.59) \)

Which expression is equivalent to \( 7(6y + 4) \)?

- **A** \((7 \times 6)y + 4\)
- **B** \(7y(6 + 4)\)
- **C** \((7 \times 6)y + (7 \times 4)\)
- **D** \((7 \times 6)y + (7 \times 4)y\)
18 Look at the expression below.

\[ \frac{4n}{5} - 7 \]

Which of these has the same meaning as this expression?

F seven less than the sum of four times a number \( n \) and five

G the difference between seven and five less than four times a number \( n \)

H seven less than the quotient when four times a number \( n \) is divided by five

J the difference between seven and the quotient when five is divided by four times a number \( n \)

19 Look at the equation below.

\[ 2x - 1 = 5 \]

What value of \( x \) makes the equation true?

A 2

B 3

C 8

D 12
20 Which point is located at \((-5, 4)\) on the grid below?

- **F** Point W
- **G** Point X
- **H** Point Y
- **J** Point Z
What is the measure of the missing exterior angle for the figure shown below?

A. 80°  
B. 100°  
C. 160°  
D. 260°
A circle has a diameter of 30 centimeters (cm). Which measurement is closest to the area of the circle?

\[ A = \pi r^2 \]
\[ \pi \approx 3.14 \]

- **F** 47.1 cm²
- **G** 188.4 cm²
- **H** 706.5 cm²
- **J** 2,826 cm²
The picture below shows the dimensions of a display cabinet shaped like a triangular prism.

![Diagram of a triangular prism]

**Surface Area = sum of the area of the faces**

Area of Rectangle = \( lw \)

Area of Triangle = \( \frac{1}{2}bh \)

What is the surface area of the display cabinet?

A  156 square inches
B  216 square inches
C  312 square inches
D  336 square inches
The picture below shows a cylinder-shaped basket with a radius of 3 inches and a height of 7 inches.

Volume of a cylinder = \( \pi r^2 h \)

\( \pi \approx 3.14 \)

Which is closest to the volume of the basket?

- **F** 197.82 cubic inches
- **G** 131.88 cubic inches
- **H** 65.94 cubic inches
- **J** 28.26 cubic inches
The lengths of 4 cars are displayed on the graph.

Which feature of the graph may be misleading?

A. The scale does not start at zero.
B. The values on the horizontal axis increase by 5.
C. The bars are horizontal instead of vertical.
D. The bars are not in order from longest to shortest.
A town mayor wants to know if the residents of a town are in favor of building a new football stadium. On Saturday, he randomly surveyed 50 male residents of the town to see if they were in favor of the new stadium. Which sentence best explains why this sample may be biased?

F The sample was taken on only one day.
G The sample included only males in the survey.
H The sample included residents of only one town.
J The sample did not include all the males in the town.
Thermometers were placed inside different-colored socks made of the same material and placed on a sunny sidewalk. After 30 minutes, the temperatures were collected and recorded in the table below.

<table>
<thead>
<tr>
<th>Sock Color</th>
<th>Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>39</td>
</tr>
<tr>
<td>Dark Green</td>
<td>37</td>
</tr>
<tr>
<td>Grey</td>
<td>33</td>
</tr>
<tr>
<td>White</td>
<td>32</td>
</tr>
</tbody>
</table>

Which conclusion best explains the difference in the temperatures?

A  The thermometers absorbed energy from the sidewalk.
B  The dark-colored socks absorbed more solar energy.
C  The solar energy did not reach the white sock.
D  The dark-colored socks refracted the sunlight.
2 From the same type of aluminum, several pieces have been hand cut to the same size. The data collected for the samples are shown below.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mass (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11.25</td>
</tr>
<tr>
<td>2</td>
<td>10.85</td>
</tr>
<tr>
<td>3</td>
<td>12.75</td>
</tr>
<tr>
<td>4</td>
<td>11.00</td>
</tr>
</tbody>
</table>

The mass of which sample was most likely recorded incorrectly?

F Sample 1
G Sample 2
H Sample 3
J Sample 4
### Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

**Performance Indicator:** 0607.TE.2 Evaluate a protocol to determine if the engineering design process was successfully applied.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. A bridge that crosses a small river was damaged by a flood. After engineers repair the bridge, which engineering procedure should be performed next?</td>
<td>A test the strength of the bridge</td>
<td>The strength of the bridge needs to be tested to ensure it can safely support traffic after repair.</td>
</tr>
<tr>
<td></td>
<td>B build a small-scale model of the bridge</td>
<td>A model can help identify potential weaknesses before full-scale construction.</td>
</tr>
<tr>
<td></td>
<td>C identify how fast the water in the river travels</td>
<td>This information is crucial for understanding erosion risks and drainage.</td>
</tr>
<tr>
<td></td>
<td>D measure the width of the river</td>
<td>While useful, measuring the width is not directly related to the structural integrity of the bridge.</td>
</tr>
</tbody>
</table>

### Reporting Category: INQUIRY AND TECHNOLOGY & ENGINEERING

**Performance Indicator:** 0607.TE.3 Distinguish between the intended benefits and the unintended consequences of a new technology.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. New fluorescent bulbs use less electrical energy and last longer than traditional incandescent bulbs. What is a benefit of this technological advance?</td>
<td>F The bulbs will never need to be replaced.</td>
<td>While bulbs may last longer, they do not become permanent.</td>
</tr>
<tr>
<td></td>
<td>G There will be more solar energy available.</td>
<td>Fluorescent bulbs do not affect solar energy directly.</td>
</tr>
<tr>
<td></td>
<td>H Fewer bulbs will be disposed of in landfills.</td>
<td>This is a benefit, as it reduces waste.</td>
</tr>
<tr>
<td></td>
<td>J Homes will need fewer light sources.</td>
<td>Although true, not a direct benefit of the technology.</td>
</tr>
</tbody>
</table>
A grassland food web is shown below.

Which organism in this food web is a producer?

A  Snake  
B  Toad  
C  Grass  
D  Spider  

Go On
Which process begins the transfer of materials and energy throughout a forest ecosystem?

- F photosynthesis
- G metamorphosis
- H growth
- J reproduction

A grassland biome contains many abiotic and biotic factors. What is an example of a biotic factor of this biome?

- A water
- B plants
- C air
- D clouds
Plants in the tundra biome grow close to the ground and have shallow root systems. Which statement best explains why these plants have shallow root systems?

- F  The plants are eaten before they are mature.
- G  The plants can be easily transplanted.
- H  The ground is frozen much of the year.
- J  The seeds must be spread quickly.
The data table describes the movements of components in the universe.

<table>
<thead>
<tr>
<th>Component</th>
<th>Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Orbits around planets</td>
</tr>
<tr>
<td>X</td>
<td>Revolves around the sun</td>
</tr>
<tr>
<td>Y</td>
<td>Rotates through space around their centers</td>
</tr>
<tr>
<td>Z</td>
<td>Revolves around the sun in the same direction as planets</td>
</tr>
</tbody>
</table>

Which component is best described by letter W?

A  asteroids
B  galaxies
C  moons
D  suns
10. During a solar eclipse, the sun and the moon appear to have exactly the same diameter. Which best explains this phenomena?

F. The sun has a greater gravitational attraction than the moon because it is larger.
G. The moon is larger than the sun but appears to be the same size because it is slightly closer to Earth.
H. The moon is smaller than the sun but appears to be the same size because it is much closer to Earth.
J. The sun travels closer to Earth than the moon because of its elliptical orbit.

11. Which most likely occurs in a 24-hour period?

A. The moon rotates once on its axis.
B. Earth rotates once on its axis.
C. The moon rotates once around Earth.
D. Earth rotates once around the sun.
Which diagram best shows the arrangement of the Earth, sun, and moon during a new moon?

- F
- H
- G
- J
The diagram shows the sun, Earth, and four different locations of the moon.

At which position would the moon be located for there to be the highest high tides at location X on Earth?

A  1
B  2
C  3
D  4
14 A diagram of Earth revolving around the sun is shown below.

Winter is occurring in the Northern Hemisphere when Earth is at which position?

F 1
G 2
H 3
J 4
The diagram shows the locations of the sun, Earth, and the moon.

Which of these is possible only when the sun, Earth, and the moon are aligned as shown?

A. a solar eclipse
B. a third-quarter moon
C. a lunar eclipse
D. a first-quarter moon
The diagram represents air circulating over coastal land and the ocean.

What most likely causes the air rising from the land to be warm?

- **F** heat from electricity
- **G** heat from the sun
- **H** heat from hot springs
- **J** heat from decomposition
The data table below lists the amount of rainfall measured during a six-month period at a particular location.

<table>
<thead>
<tr>
<th>Month</th>
<th>Rainfall (centimeters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>7.5</td>
</tr>
<tr>
<td>May</td>
<td>9.0</td>
</tr>
<tr>
<td>June</td>
<td>6.0</td>
</tr>
<tr>
<td>July</td>
<td>6.0</td>
</tr>
<tr>
<td>August</td>
<td>10.0</td>
</tr>
<tr>
<td>September</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Which bar graph below correctly displays the data in the table?

A

B

C

D
Students recorded the temperature outside their classroom every day for 2 months. Then they calculated the average weekly temperature. Their data are recorded in the table below.

<table>
<thead>
<tr>
<th>Week</th>
<th>Average Temperature °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
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<tr>
<td>3</td>
<td>21</td>
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<td>6</td>
<td>25</td>
</tr>
<tr>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>8</td>
<td>28</td>
</tr>
</tbody>
</table>

Which graph best shows their results?
19 When the atmosphere is warmed by the sun, a change in air pressure results in
A clouds.
B humidity.
C precipitation.
D wind.

20 Which best explains the cause of currents that move north from the equator?
F Cold water at the poles rises and moves toward the tropics.
G Warm water at the equator rises and moves toward the poles.
H Warm water near the coastline rises and moves toward the poles.
J Cold water deep in the ocean rises and moves toward the tropics.
A student observes a clear sky and a temperature reading of 35° Celsius at 8:00 a.m. What is the most likely prediction about the day’s weather?

A  The day’s weather will be cold.
B  The day’s weather will be rainy.
C  The day’s weather will be hot.
D  The day’s weather will be snowy.

A baseball rests on a tabletop as shown in the diagram below.

What type of potential energy is stored in the baseball based on its position on the table?

F  heat
G  chemical
H  elastic
J  gravitational
Designers of building materials need to test the strength and flexibility of a new material. They will stack cement blocks on top of the material to see how much force the material can withstand until it bends. Which tool will best test the strength of the material?

A. microscope  
B. stopwatch  
C. thermometer  
D. spring scale
At which point is the kinetic energy the greatest?

F 1
G 2
H 3
J 4

A diagram of a student on a playground swing is shown below.
25 An automobile engine converts the chemical energy in gasoline mostly into heat and
   A nuclear energy.
   B light energy.
   C electromagnetic energy.
   D mechanical energy.

26 A student heats different volumes of water in glass beakers and times how long it takes for the water
temperatures to return to room temperature. Which tool should be used to measure the volume of
the water?
   F graduated cylinder
   G meter stick
   H stopwatch
   J thermometer
27. A gasoline engine only converts about 15% of the chemical energy of gasoline into mechanical energy. What other energy transformation is taking place in the gasoline?

- A. chemical to thermal
- B. nuclear to chemical
- C. electrical to thermal
- D. mechanical to nuclear

28. A student wants to determine if different colored boxes produce the same temperature as a white box. The student places white, blue, and red boxes of the same size in the sunlight. A thermometer is placed inside each box. The student observes and records the temperatures in the boxes throughout the day. Which is the dependent variable in this investigation?

- F. size of the boxes
- G. repeated trials
- H. color of the boxes
- J. recorded temperatures
A diagram of an electric circuit is shown below.

When the circuit above is complete, which energy transformation will occur?

A  light to heat
B  electrical to sound
C  light to sound
D  electrical to light
Reporting Category: PHYSICAL SCIENCE: Energy, Forces in Nature
Performance Indicator: 0607.12.1 Identify how simple circuits are associated with the transfer of electrical energy when heat, light, sound, and chemical changes are produced.

30 Which diagram shows a simple circuit that will cause the light bulb to glow?

F

G

H

J
31 Which is the best example of adaptive biotechnology?

A cookware made of cast iron
B treating a headache with aspirin
C measuring volume in a beaker
D doorbells that flash a light when activated

32 Which material would best conduct electricity?

F copper
G plastic
H diamond
J wood
Which person is involved in a barter economy?

A  a fisher who is paid for each pound of fish
B  a rancher who sells cattle for money
C  a baker who buys wheat from a local mill
D  a farmer who trades chickens for milk
Based on the map above, what was traded from Africa to the Americas?

- F Tobacco
- G Slaves
- H Sugar
- J Cotton
3 The evolution from a hunter-gatherer system to an agricultural system resulted in the

A conservation of natural resources.
B limiting of population growth.
C building of transportation routes.
D creation of surpluses of food.

4 Which type of ancient civilization developed on the Huang He River in what is now China?

F military
G nomadic
H industrial
J agricultural
Why did most medieval European cities develop along coastlines and rivers?

A  Fish was the primary food resource.
B  Weather was generally milder near water.
C  Trade routes were created along waterways.
D  Forests were essential for constructing buildings.

During the 1500s, European desire for spices led to

F  improvements in farming.
G  the exploration of the East Indies.
H  advances in government.
J  the division of Europe into city-states.
7. King Abdullah of Saudi Arabia rules a
   A. republic.
   B. democracy.
   C. monarchy.
   D. city-state.

8. Which statement best describes a characteristic that a nomadic tribe would find useful in a leader?
   F. gains the best education
   G. wins the most popular votes
   H. knowledge of animal migrations
   J. possession of a hereditary title
Reporting Category: 2 Governance and Civics

Performance Indicator: 6.4.3 Identify the development of written laws (i.e., Hammurabi’s Code, Justinian Code, Magna Carta).

9. Which set of written laws was the first to be developed?
   A. Magna Carta
   B. Justinian’s Code
   C. Twelve Tables
   D. Hammurabi’s Code

Performance Indicator: 6.4.4 Recognize the roles assigned to individuals in various societies (i.e., caste systems, feudal systems, city-state systems, class systems).

10. Which was the largest group in European feudal society?
    F. lords
    G. knights
    H. serfs
    J. monks
Reporting Category: 2 Governance and Civics
Performance Indicator: 6.4.5 Compare and contrast the lives of individual citizens in various governmental organizations (i.e., monarchial systems, caste systems, democratic systems-Greek).

11. In which type of government would a citizen have the most political power?
   A. dictatorship
   B. monarchy
   C. democracy
   D. plutocracy

Reporting Category: 3 Geography
Performance Indicator: 6.1.1 Recognize the basic components of culture (i.e., language, common values, traditions, government, art, literature, lifestyles).

If a judge . . . present his judgement in writing; if later error shall appear in his decision, and it be through his own fault, then he shall pay twelve times the fine set by him . . .

If any one steal cattle or sheep, . . . the thief shall pay thirtyfold . . .

— Hammurabi’s Code

12. Which part of Babylonian culture is best described by the excerpt above?
   F. language
   G. values
   H. arts
   J. literature
Physical Characteristics
Surrounding Rome

- Seven hills
- Several miles inland
- Tiber River

13 Based on the list above, the site of ancient Rome was a safe location for development because it offered

A  a pleasant climate.
B  a regular food supply.
C  an easily defended site.
D  a site for religious pilgrimage.

14 The culture of South America was strongly influenced by

F  China and Japan.
G  Sudan and Ethiopia.
H  India and Pakistan.
J  Spain and Portugal.
Performance Indicator: 6.3.1 Identify the basic components of a world map (i.e., compass rose, map key, scale, latitude and longitude lines, continents, oceans).

15 Which map component explains the meaning of symbols on a map?
   A scale
   B compass rose
   C key
   D title

Performance Indicator: 6.3.2 Identify basic geographic forms (i.e., rivers, lakes, bays, oceans, mountains, plateaus, deserts, plains, coastal plains).

- Formed by plate movement
- Shaped by erosion

16 The list above describes which type of landform?
   F mountains
   G plains
   H deserts
   J rivers
Which ancient civilization developed between the rivers shown on the map above?

A  Chinese
B  Indian
C  Egyptian
D  Mesopotamian
Which geographic feature was the main reason for the location of the ancient Egyptian civilization?

F a coastal plain
G a mountain
H a desert oasis
J a river
Reporting Category: 3 Geography

Performance Indicator: 6.3.5 Use a variety of maps to understand geographic and historical information (i.e., political maps, resource maps, product maps, physical maps, climate maps, vegetation maps).

Carthaginian Empire, 3rd Century B.C.E.

Key
- Carthaginian Empire
- City

19 Which city on the map above was a part of the Carthaginian Empire in the 3rd century B.C.E.?

A  Saguntum
B  Massalia
C  Rome
D  Athens
Which factor most influenced the trend shown on the graph above?

F  creation of public schools
G  improvements in military equipment and tactics
H  development of a new religion
J  advancements in farming and health care
Who founded Islam?

A  Jesus
B  Confucius
C  Mohammed
D  Abraham
What part of Greek culture is identified in Homer’s *Iliad*?

F gods and goddesses  
G mathematics and sciences  
H theater  
J democracy

Which development was the most influential in helping people learn about life in ancient Egypt?

A writing  
B the plow  
C irrigation  
D the wheel
### Reporting Category:
4 World History: Prehistory-Ancient Civilization

### Performance Indicator:
WH1.6.5.1 Read a timeline and order events of the past between prehistory and the Renaissance.

#### Some Developments in Civilization

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100 B.C.E.</td>
<td>Cuneiform was developed</td>
</tr>
<tr>
<td>1500 B.C.E.</td>
<td>Aryans invaded the Indus River Valley</td>
</tr>
<tr>
<td>509 B.C.E.</td>
<td>Cleisthenes started the first democracy in Athens</td>
</tr>
<tr>
<td>27 B.C.E.</td>
<td>Octavian became the first emperor of Rome</td>
</tr>
<tr>
<td>763 C.E.</td>
<td>Baghdad became a major center of learning and culture</td>
</tr>
</tbody>
</table>

**Note:** Dates are approximate.

#### 24 The Roman Empire fell in 476 C.E. Where on the timeline should this event be placed?

- **F** before 3100 B.C.E.
- **G** between 3100 B.C.E. and 1500 B.C.E.
- **H** between 1500 B.C.E. and 509 B.C.E.
- **J** after 27 B.C.E.
Which type of early community migrated the least?

A  hunter-gatherer  
B  nomadic herding  
C  fishing  
D  farming
The artifact shown above came from which ancient culture?

F  Chinese
G  Egyptian
H  Persian
J  Roman
Which culture developed the form of writing shown above?

- A  Chinese
- B  Greek
- C  Mayan
- D  Egyptian
Humans first lived in permanent settlements after they learned how to

- write words.
- make bronze.
- grow food.
- sail ships.

A century is a period of

- 1 decade.
- 10 months.
- 100 years.
- 1,000 hours.
Ancient Greek civilization reached its peak during which historical era?

F  Dark Ages
G  Classical Period
H  Middle Ages
J  Renaissance

Which of these languages is derived from Latin?

A  Spanish
B  Greek
C  Arabic
D  Hebrew
The books on the bookshelf shown above are examples of the belief system from which ancient civilization?

- **F** Greek
- **G** Chinese
- **H** Mesopotamian
- **J** Persian
Performance Indicator: WH1.6.5.12 Recognize the possible causes of change in civilizations (i.e., environmental change, political collapse, new ideas, warfare, overpopulation, unreliable food sources, diseases).

Problems of the Sumerians

- Periods of flooding and drought
- No natural barriers for protection
- Few building materials

33 The problems described above were primarily

A  military.
B  political.
C  religious.
D  environmental.
Reporting Category: 4 World History: Prehistory-Ancient Civilization

Performance Indicator: WH1.6.5.17 Recognize the significant mythologies of the Sumerians, Egyptians, Greeks, and Romans.

? Mythology

- Mt. Olympus
- Zeus
- Athena

34 Which ancient culture completes the title of the list above?

F Olmec
G Sumerian
H Greek
J Chinese
Traits of ____?

- Lived in Scandinavia
- Conquered Western Europe in the 900s
- Developed new seafaring skills

35 Which group completes the title of the list above?

A. Vandals
B. Mongols
C. Vikings
D. Franks

36 William of Normandy is important in English history because he

F. built a wall to keep out Celtic tribes.
G. conquered England and established feudalism.
H. unified England and Switzerland into one kingdom.
J. led the first expedition to settle Iceland.
Which occupation involves the study of artifacts from an ancient civilization?

A. genealogist  
B. anthropologist  
C. archaeologist  
D. geologist

Which region completes the table above?

F. China  
G. India  
H. Central America  
J. West Africa
Which abbreviation indicates an event that occurred before the year 1?

A  P.M.
B  C.E.
C  A.M.
D  B.C.E.

According to the excerpt above, why did people prefer to settle on the island of Española to other islands in the Caribbean?

F  The area was more suitable for farming.
G  A trade colony was already established.
H  The inhabitants were better farmers.
J  It was less expensive to trade goods.
Based on the timeline above, which event happened after Elizabeth I became the ruler of England?

A  Henry VIII declared himself the leader of the Church of England.
B  Copernicus announced that the planets revolve around the sun.
C  Mary Tudor was crowned as Queen of England.
D  William Shakespeare was born.
The inventions of the compass and the astrolabe allowed

- F sailors to sail their ships in the opposite direction of the wind.
- G scientists to measure the distance from Earth to the sun.
- H mathematicians to observe the planets of the solar system.
- J explorers to travel the open oceans without getting lost.

During the Renaissance era, the development of many ideas was based on the study of

- A Christian literature.
- B Greek and Latin literature.
- C Islamic culture.
- D Asian and African trade routes.
Reporting Category: 5 World History: Dark Ages-Renaissance

Performance Indicator: WH2.6.5.15 Evaluate to what extent civilizations build on the accomplishments of previous civilizations.

44 The government of which ancient civilization most influenced the United States system of government?

F India
G Rome
H Egypt
J Sumer

Performance Indicator: WH2.6.5.16 Compare and contrast the historical development of the Western, Eastern, and African cultures.

45 Which cultural factor was a universal development in Western, Eastern, and African civilizations?

A democracy
B a system of agriculture
C monotheism
D a written alphabet
<table>
<thead>
<tr>
<th>Reporting Category:</th>
<th>5 World History: Dark Ages-Renaissance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Indicator:</td>
<td>WH2.6.6.2 Recognize the impact of individuals on world history (i.e., Charlemagne, Joan of Arc, William the Conqueror, Ramses II, Julius Caesar, Socrates, Aristotle, Marco Polo, Alexander the Great, King Ferdinand and Queen Isabella, Martin Luther, and Johannes Gutenberg).</td>
</tr>
</tbody>
</table>

46 Who invented the first printing press?

- **F** Johannes Gutenberg
- **G** William Shakespeare
- **H** Nicolaus Copernicus
- **J** Thomas More

STOP

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<table>
<thead>
<tr>
<th>1</th>
<th>D</th>
<th>23</th>
<th>C</th>
<th>45</th>
<th>D</th>
<th>67</th>
<th>B</th>
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<tbody>
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<td>2</td>
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<td>24</td>
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# Math Answer Key

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Tennessee Comprehensive Assessment Program
Achievement Test ~ Grade 6
Item Sampler