

**FILE A – For Optional Classroom Use as a Practice Test**

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# **Session 1A–Reading Practice Test**

# ENGLISH LANGUAGE ARTS: READING—SESSION 1A

This practice session has two reading selections and ten multiple-choice questions. Read each selection and answer the questions about it in the spaces provided in your answer booklet.

*This article tells about an inventor who imitated nature to invent Velcro. Read the article and then answer the questions that follow.*

## Imitating Nature

*Laurel Sherman*

I FIRST GOT INTERESTED at the fabric store, as a clerk measured the Velcro and prepared to cut it. “Did you know that a botanist invented Velcro?” she commented.

Of course, I thought, having always suspected that anything so mysterious and wonderful as Velcro must have an unusual origin. As I thought about it, I began to wonder how someone interested in plants had gotten involved with those sticky tapes. But after I learned about George de Mestral, it all seemed perfectly obvious.

George, a Swiss inventor, not a botanist, was fond of hunting. In 1948, after a day in the woods and fields with his dog, he sat down to the familiar chore of removing burs from his wool socks and from the dog’s hair. He started wondering what it was that made the burs cling so. Under a microscope he saw that each bur had thousands of tiny hooks, each facing a different direction. The wool in his socks was a tangle of loops—just right to catch the hooks of the burs. He couldn’t dislodge them with a simple twist because just as one set of hooks was free, another set would grab the loops.

4 George knew he wanted to duplicate the action of the bur. The new fastener he had in mind would not have to be snapped, buttoned, or zipped. One press to fasten, one pull to unfasten.

He spent the next eight years trying to imitate what nature did so effortlessly every fall. At first he had two cotton tapes made by hand. They were flimsy, but they did stick. By a wonderful accident, some nylon thread was delivered to his shop. He

realized at once that if he could handle this new, tough fiber, he could make a firmer and more durable tape.

But problems mounted. The fuzzy side of the tape had to have at least three hundred loops per square inch for the hooked side to hold. Glue was needed to hold the loops so they wouldn’t slip.

The hooks themselves had to be shaped from nylon thread. Eventually George found that he could mold the thread into short loops with infrared heat.\* Next he cut each loop in half with clippers to leave two hooks facing each other.

By 1958 George had his fastener. He called it “Velcro,” from the French words *velours* (velvet) for the soft, fuzzy part and *crochet* (hook) for the hooks.

At first people did not want Velcro on their shoes or clothes. It was the American space program that found uses for the product. Away from Earth’s gravity, anything not fastened down will drift around, bouncing off walls and astronauts. Astro-Velcro was used to hold tools, food, and clothing in place.

Now it’s everywhere. We use it to fasten shoes and boots. Flight attendants use it to hold the headrest on your airline seat; doctors use it to tighten the cuff when they read your blood pressure. But perhaps George de Mestral came up with the best idea of all: he used it to fasten articles about Velcro to a bulletin board. Now, if he’d only gone on to invent an unfastener, one that would remove burs from woolen socks and dog’s hair!

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\*infrared heat: invisible heat rays

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Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 5 on page 2 of your practice test answer booklet.

1. Which activity **directly** inspired George de Mestral to invent Velcro?
  - A. walking in the field
  - B. hunting in the woods
  - C. removing burs from socks
  - D. twisting and pulling hooks
  
2. Which word means the same as **duplicate** in paragraph 4?
  - A. copy
  - B. extend
  - C. stroke
  - D. compare
  
3. Short loops are shaped from the nylon thread when the thread is
  - A. tightened.
  - B. heated.
  - C. hooked.
  - D. taped.
  
4. What was Astro-Velcro first used for?
  - A. fastening shoes and boots
  - B. holding things in place during space travel
  - C. tightening the cuffs on blood pressure machines
  - D. holding the headrests on airplane seats
  
5. Which sentence **best** explains the main idea of the article?
  - A. Hunters and scientists often make the best inventors.
  - B. Inventions often require many people to perfect them.
  - C. Accidents can show the best way to fix difficult problems.
  - D. Interesting inventions can be made by observing everyday objects.

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Below are the poem “Harriet Tubman” by Eloise Greenfield and a short interview of the poet. Read the selections and then answer the questions that follow.

## Harriet Tubman

**Editor’s Note:** Harriet Tubman was a slave in Maryland. She escaped slavery in 1849. Then she became a famous “conductor,” or guide, on the Underground Railroad, the secret system of people, pathways, and houses that helped slaves escape to the North and freedom. This poem celebrates Harriet Tubman’s heroic deeds.

Harriet Tubman didn’t take no stuff  
Wasn’t scared of nothing neither  
Didn’t come in this world to be no slave  
And wasn’t going to stay one either

5 “Farewell!” she sang to her friends one night  
She was mighty sad to leave ’em  
But she ran away that dark, hot night  
Ran looking for her freedom

10 She ran to the woods and she ran through the woods  
With the slave catchers right behind her  
And she kept on going till she got to the North  
Where those mean men couldn’t find her

Nineteen times she went back South  
To get three hundred others  
15 She ran for her freedom nineteen times  
To save black sisters and brothers

Harriet Tubman didn’t take no stuff  
Wasn’t scared of nothing neither  
Didn’t come in this world to be no slave  
20 And didn’t stay one either

And didn’t stay one either

—Eloise Greenfield

### What Makes a Heroine?

*Storyworks* talked to the poet of “Harriet Tubman.” We wanted to know what it was like to write about this heroine.



THE POET  
**Eloise  
Greenfield**

**Why did you decide to write about Harriet Tubman?**

I was writing a book of love poems. I wanted to include a poem about someone who had given so much—who had risked her life—for African-American people. I used a rhythm that I hoped would create a mood of triumph.

**What kind of person was Harriet Tubman?**

I did research. I learned that she was not satisfied to save just herself, but continued to go to the South and save others. I know she loved her family, because she rescued them. She had to be very courageous and intelligent to plan all these escapes.

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Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 6 through 10 on page 2 of your practice test answer booklet.

6. In the Editor's Note, the word "conductor" is in quotes to show that
- A. the word was spoken by someone else.
  - B. the word means the opposite of the word "guide."
  - C. the emphasis is on a specific meaning of the word.
  - D. the reader should look up the meaning of the word.
7. The first and last stanzas of the poem "Harriet Tubman" reflect the
- A. conditions in which slaves lived.
  - B. voice and personality of Harriet Tubman.
  - C. main point of Eloise Greenfield.
  - D. natural way the narrator speaks.
8. In lines 13 through 16, what was Harriet Tubman doing?
- A. escaping from slavery
  - B. being returned to slavery
  - C. rescuing the slave owners
  - D. rescuing other slaves
9. What is the **main** purpose of "What Makes a Heroine?"
- A. to give more information about poetry written about Harriet Tubman
  - B. to show that Eloise Greenfield likes Harriet Tubman
  - C. to explain why Eloise Greenfield wrote about Harriet Tubman
  - D. to give information about Eloise Greenfield's life
10. Which word **best** describes Harriet Tubman?
- A. content
  - B. determined
  - C. passive
  - D. angry

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# **Session 1B–Reading Practice Test**

# ENGLISH LANGUAGE ARTS: READING—SESSION 1B

This practice session has one reading selection, ten multiple-choice questions, and two constructed-response questions. Read each selection and answer the questions about it in the spaces provided in your answer booklet.

The following article tells about the long history of kites and kite festivals and how to make your own kite. Read the article and then answer the questions that follow.

## The Fighting Kites

Since their invention in China over 3,000 years ago, kites of all shapes and sizes have been flying all over the world. Although kites have been flown mostly for recreation, Asian folklore is rich with tales of kites used for purpose as well as pleasure.

One legend of China's Han dynasty tells how kites were used to defeat an invading army. Dozens of kites were secretly flown over the enemy's camp in the dark of night. Attached to each kite were bamboo hummers that moaned eerily in the wind. According to the legend, the enemy fled in terror at the sound. Military leaders also used kites to spy on enemy strongholds, to carry a person over an obstacle, or to inject fear in the hearts of a foe. Huge eyes painted in black *sumi* ink intimidated the enemy from the air. Eventually, famous military adventures became part of the art captured on paper kite faces.

The role of kites changed from supporting military activities into competitive festivals that mimicked military battles. In the 1500s, one of the first kite-fighting festivals took place in Japan. Kite fighting between towns has since become a very popular event, as competitive as soccer in some parts of the world.

Many towns in Japan compete in the kite-fighting festivals. Participants design and decorate kites to represent them in the games. Traditional designs are still used in festival kites. The *baramon* from Nagasaki has a hummer on it, and the helmet of an old soldier is depicted on the face. One of the most decorative kites today is the *edo*, which requires a dozen lengths of kite string to guide it. The dragon kite is the *jidako*, with the Japanese character for "dragon" inked upon the paper surface.

Fighting kites are fitted with tiny knives, and the goal of a kite fight is to cut the string of the opponent's kite, setting the defeated kite free and sending it crashing to the ground. Known for their symmetry and balance, fighting kites can fly in any direction at great speed, with or without a tail.

Selection for a kite-fighting team is very competitive. Prior to a fighting festival, the town teams practice maneuvering their kites for hours. During the festival days, town teams pit themselves against one another, waging a battle high above crowds of spectators. Amidst the shouts and urgings of the fans, the kite battles can go on for hours. The victorious kite team brings great honor to its town. The fighting kites of Japan have become the modern samurai of the sky.

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Now that you have learned about the history of flying kites, let's learn how to make two types of kites.

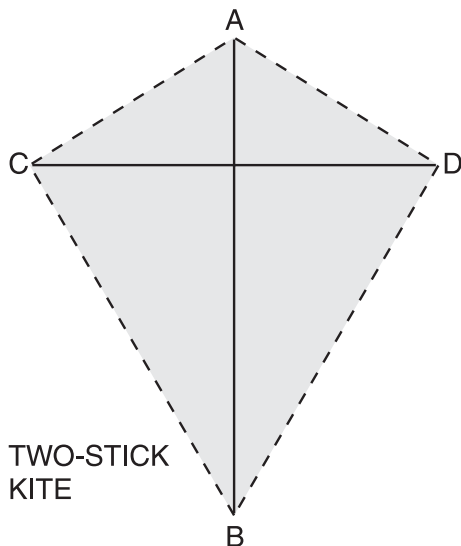
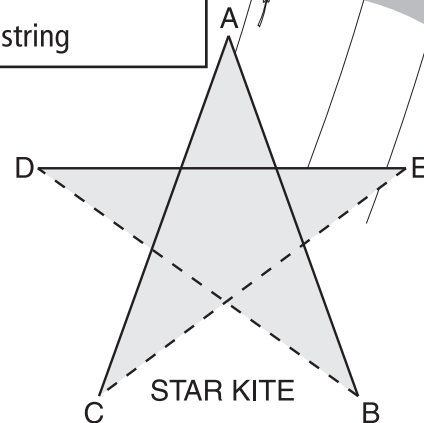
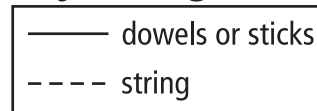
## Let's Make a Kite!

### Star Kite

The star kite is made with three 36-inch dowels (A-C, D-E, and A-B), glued and lashed together, as shown in the diagram. There are two outline strings—one at B-D and one at C-E. Lash the outline strings securely to the notched ends of the dowels.

After covering the frame with paper, fasten a "bridle string" to the ends of dowel A-C, dowel D-E, and dowel A-B. The bridle strings should be somewhat loose to allow you to gather them together to attach the flying string. Bring the three bridle strings together at a point slightly above the middle of dowel D-E. Attach the flying string where the three bridle strings join.

### Key to diagrams



### Two-Stick Kite

Cut dowel A-B 36 inches long and dowel C-D 30 inches long. Apply glue where sticks cross and then lash them together with several windings of strong cord. Let glue dry.

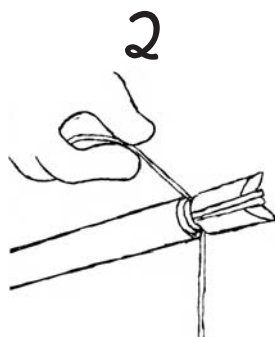
Next notch ends of each stick and make a little cut all around the end of each stick about  $\frac{1}{2}$  inch from the tip, as shown. Run string around and through these notches to form outline of kite.

Place your kite frame on the floor on top of paper. Cut out paper to fit frame, allowing a 1-inch margin all around. Then decorate your kite with a picture or some interesting designs. Fold margin of paper over frame and glue tightly over string. Cut a piece of string about 40 inches long for the bridle string. Fasten it at points C and D. Then tie your long flying string at the center of the bridle string, and your kite is ready to fly!

**Note:** A kite tail will keep your kite flying straight. Cut a piece of string about 36 inches long and tie strips of paper or cloth about every 6 inches along the string. Attach the tail to the bottom of your kite.



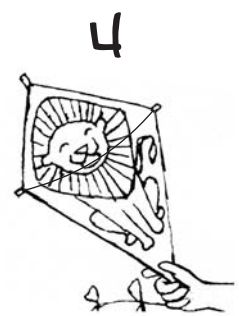
1 Lash sticks together.



2 Lash outside string.



3 Fold and paste paper.



4 Kite with bridle string.

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Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 11 through 20 on page 2 of your practice test answer booklet.

11. In the first paragraph of “The Fighting Kites,” which word could replace “recreation” without changing the meaning of the sentence?
- A. fun
  - B. exercise
  - C. competition
  - D. festival
12. The author of “The Fighting Kites” compares kite fighting to soccer **most likely** to show
- A. that both were common in Japan.
  - B. that kite fighting had many rules.
  - C. how many people play both sports.
  - D. how popular kite fighting is.
13. What is the goal of a kite fight?
- A. to fly a kite higher than the opponent’s kite
  - B. to build a kite that will carry a person over an obstacle
  - C. to decorate a kite with the best traditional kite designs
  - D. to use a kite to cut the strings of the opponent’s kite
14. Based on information in “The Fighting Kites,” which statement **best** summarizes the role of kite flying in China and Japan?
- A. Although kite flying was important to Asian culture, today it has lost some of its value.
  - B. In Asian countries, kite flying is more popular today than it was in the past.
  - C. Kite flying is and has been an important part of Asian cultural traditions.
  - D. In Asia today, kites are not being flown in competitions.
15. When making the star kite, which step comes **before** covering the frame with paper?
- A. Fasten the bridle string to the ends of the dowels.
  - B. Lash the outline strings to the ends of the dowels.
  - C. Attach the tail to the bottom of the kite.
  - D. Bring together the bridle strings.
16. According to the diagram of the star kite in “Let’s Make a Kite!” which dowel ends are connected using string?
- A. C-E
  - B. A-C
  - C. D-E
  - D. A-B

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17. The words in all-capital letters near the kite diagrams in “Let’s Make a Kite!” are used as
- A. rules.
  - B. keys.
  - C. labels.
  - D. directions.
18. Based on the note at the end of “Let’s Make a Kite!” what would **most likely** happen to a kite with no tail?
- A. It would fly crookedly.
  - B. It would rip apart.
  - C. It would rise only a little bit.
  - D. It would stay on the ground.
19. Why are the numbered drawings included with “Let’s Make a Kite!”?
- A. to demonstrate how to decorate a kite
  - B. to show how to make a two-stick kite
  - C. to explain how to make a star kite
  - D. to show what an official fighting kite looks like
20. The **main** difference between “The Fighting Kites” and “Let’s Make a Kite!” is that they
- A. were written at different times.
  - B. were written by different people.
  - C. have different purposes.
  - D. are from different books.

**Write your answer to constructed-response questions 21 and 22 in the space provided on pages 3 and 4 of your practice test answer booklet.**

21. How is a star kite similar to and different from a two-stick kite? Explain your answer by using specific details from the article.
22. Describe the history and function of kite-fighting festivals. Use specific information from “The Fighting Kites” in your response.

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**Session 2A– Mathematics  
(Calculator Not Allowed) Practice Test**

# MATHEMATICS (CALCULATOR NOT ALLOWED)–SESSION 2A

This practice session has five multiple-choice questions, one short-answer question, and one constructed-response question.

Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 5 on page 5 of your practice test answer booklet.

- Which quotient is greater than 1?
  - $4 \div 4$
  - $3 \div 8$
  - $5 \div 6$
  - $7 \div 5$
- The sales tax in a state is 6%. What is 6% written as a decimal?
  - 0.006
  - 0.06
  - 0.6
  - 6.0
- Jana is making cookies using a recipe that calls for  $\frac{3}{4}$  cup of sugar. If she doubles the recipe, how much sugar should she use?
  - $1\frac{1}{4}$  cups
  - $1\frac{3}{8}$  cups
  - $1\frac{1}{2}$  cups
  - $1\frac{3}{4}$  cups
- Members of the bike club are on a 52.5-kilometer bike trip. They have traveled 24.75 kilometers so far. How many kilometers do they have left?
  - 19.50 kilometers
  - 27.75 kilometers
  - 27.85 kilometers
  - 32.25 kilometers
- At Lincoln School, 24 people volunteered to clean up a hiking trail at a park. The trail is  $4\frac{1}{2}$  miles long. The volunteers will break up into groups with 6 people in each group. Each group will clean an equal portion of the trail. How much of the trail will each group clean?
  - $\frac{3}{4}$  mile
  - $1\frac{1}{8}$  miles
  - $1\frac{3}{8}$  miles
  - $1\frac{1}{2}$  miles

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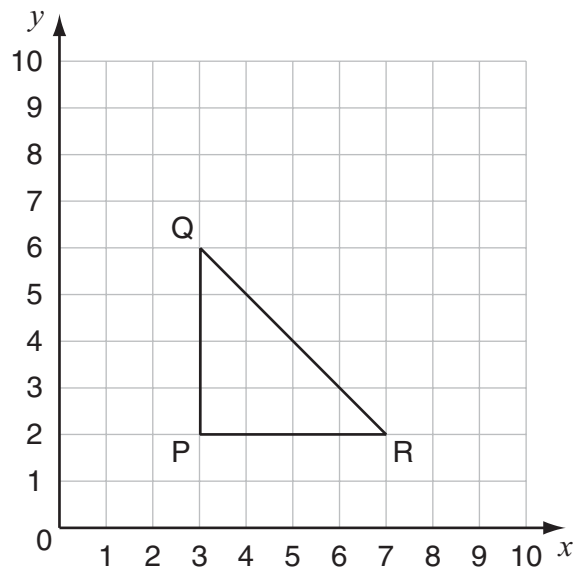
Write your answer to short-answer question 6 in the box provided on page 5 of your practice test answer booklet.

6. Jenny is learning to play the trumpet.
- She rents a trumpet for 6 months at \$21 a month.
  - The lessons cost \$25 for each session.
  - Jenny takes 18 lessons.

What is the total cost for her trumpet rental and lessons? Show all your work.

Write your answer to constructed-response question 7 in the box provided on page 5 of your practice test answer booklet. Be sure to answer all parts of the question.

7. Look at the right triangle below.



- What are the coordinates of vertex R?
- Using the grid in your answer booklet, draw a new triangle, PQT, that uses the original point P, the original point Q, and a new point T so that triangle PQT is an obtuse triangle. What are the coordinates of point T?
- Using the same grid, draw the triangle that has vertices K(3,8), L(9,9), and M(9,5).

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**Session 2B– Mathematics  
(Calculator Allowed) Practice Test**

# MATHEMATICS (CALCULATOR ALLOWED)–SESSION 2B

This practice session has twelve multiple-choice questions, one short-answer question, and one constructed-response question.

Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 8 through 19 on page 6 of your practice test answer booklet.

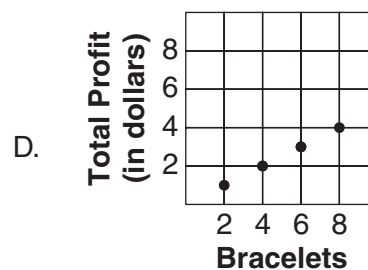
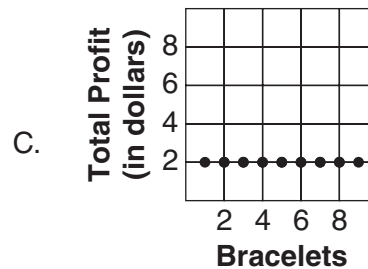
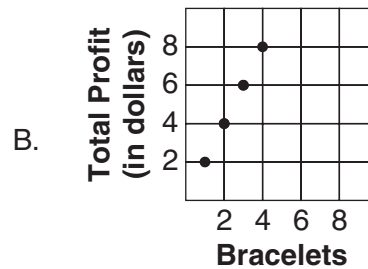
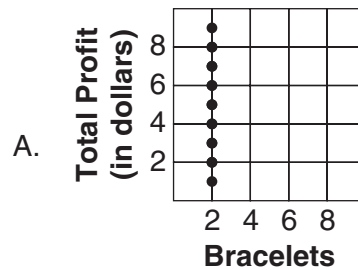
8. Which two numbers have a greatest common factor of 6 and a least common multiple of 60?

- A. 12 and 15
- B. 24 and 15
- C. 12 and 30
- D. 24 and 30

9. Maile bought 3 notebooks for \$2 each. She paid with a \$10 bill. Which number sentence can be used to find how much change, in dollars, Maile will get?

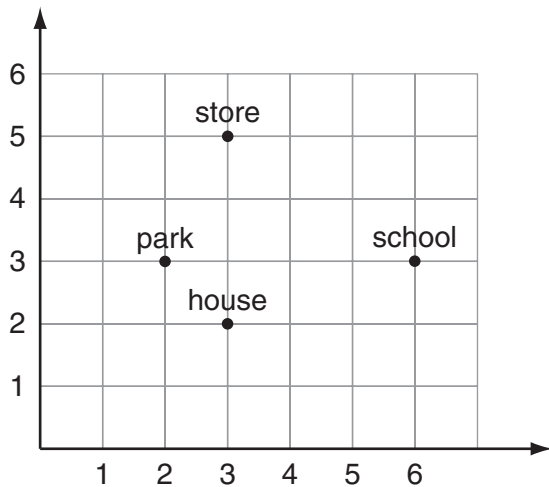
- A.  $10 - (3 \times 2) = \square$
- B.  $(10 - 3) \times 2 = \square$
- C.  $3 \times 10 - 2 = \square$
- D.  $2 \times 3 - 10 = \square$

10. Jill makes a \$2 profit on every friendship bracelet she sells. Which graph shows the relationship between the total profit and the number of bracelets sold?



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11. A map of Maria's town is shown below.



Where is the park located?

- A. (2,3)
- B. (3,2)
- C. (6,3)
- D. (3,5)

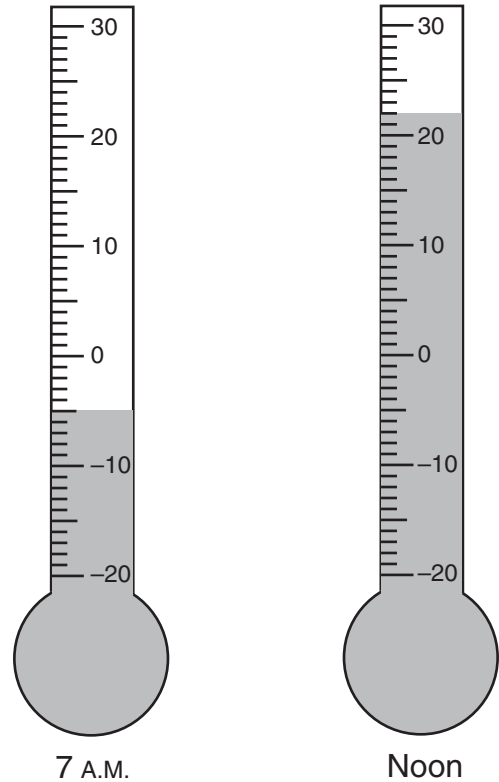
12. In the formula below,  $r$  stands for rate,  $d$  for distance, and  $t$  for time.

$$r = \frac{d}{t}$$

Tracy uses this formula to find the rate at which she jogs. One day she jogged 9 miles in 1.5 hours. What was her rate?

- A. 13.5 miles per hour
- B. 10.5 miles per hour
- C. 6 miles per hour
- D. 4 miles per hour

13. Sally looked at her outdoor thermometer at two different times as shown below.



By how many degrees did the temperature increase between 7:00 A.M. and noon?

- A. 5°
- B. 17°
- C. 22°
- D. 27°

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14. A box of ice pops has 3 grape, 3 cherry, 3 banana, and 3 orange ice pops. James took a cherry ice pop out of the box. Then Renee reached into the box without looking and took an ice pop. What is the chance that Renee will get one of her favorite flavors, grape or cherry?

- A.  $\frac{2}{11}$
- B.  $\frac{2}{12}$
- C.  $\frac{5}{11}$
- D.  $\frac{5}{12}$

15. The chart below shows the sandwich choices for lunch.

**Sandwich Choices**

Bread	Meat	Cheese
white	turkey	cheddar
wheat	ham	American

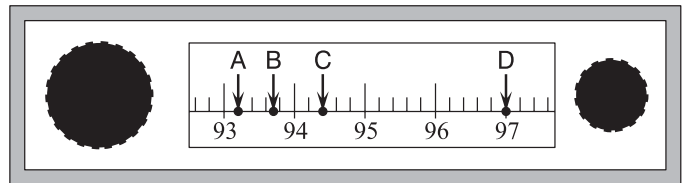
A sandwich choice consists of one bread, one meat, and one cheese. How many sandwich choices are available?

- A. 2
- B. 3
- C. 6
- D. 8

16. A shop sells small posters that have an area of 15 square feet. The shop also sells large posters that have lengths and widths 2 times as big as those of the small posters. What is the area of the large posters?

- A. 17 square feet
- B. 30 square feet
- C. 45 square feet
- D. 60 square feet

Use the picture of a radio dial below to answer question 17.



17. **WMTH** can be found at 93.7 on your radio dial. Which letter shown above represents where you would find **WMTH** if you wanted to listen to a broadcast?

- A. letter A
- B. letter B
- C. letter C
- D. letter D

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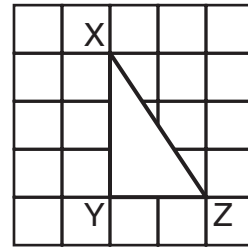
18. The chart below shows prices for some of the shirts on sale at ClothesMart.

<b>All Shirts on Sale!!</b>	
<b>Sample Sale Prices</b>	
Regular Price	Sale Price
\$ 8.00	\$ 6.00
\$12.00	\$ 9.00
\$16.00	\$12.00
\$20.00	\$15.00

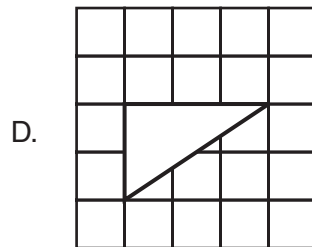
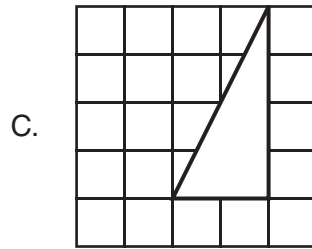
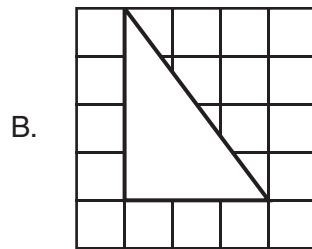
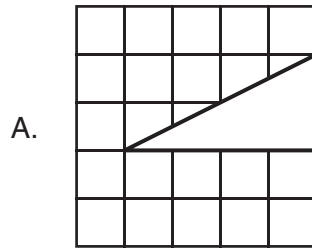
Based on the pattern in the chart, what would be the sale price for a shirt with a regular price of \$22.00?

- A. \$16.50
- B. \$17.00
- C. \$17.50
- D. \$18.00

Use triangle  $XYZ$  on the grid below to answer question 19.



19. Which triangle is congruent to triangle  $XYZ$ ?



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**Write your answer to short-answer question 20 in the space provided on page 6 of your practice test answer booklet.**

20. A farmer has decided to expand the area of her land that she will use to grow corn. The chart below shows the plans for expanding the area of corn over the next few years.

Year	Acres of Corn
1	65
2	90
3	115
4	140

If this pattern continues, how many acres of corn will the farmer have in 6 years? Explain your answer.

**Write your answer to constructed-response question 21 in the space provided on page 6 of your practice test answer booklet. Be sure to answer all parts of the question.**

21. Dominic's test scores for math are 55, 78, 78, 82, 92, 96, and 100. Dominic can choose whether to use the mean, median, or mode of his test scores for his semester grade.
- Explain which measure Dominic should choose to receive the highest grade—the mean, median, or mode. Be sure to support your answer with a complete explanation.
  - The teacher gave one more test before the end of the semester. Dominic's score on the last test was 91. Explain which measure Dominic should choose now to receive the highest grade. Be sure to support your answer with a complete explanation.

**PLEASE STOP! DO NOT GO  
ON TO THE NEXT PAGE.**



# ACKNOWLEDGMENTS

**The Maine Department of Education wishes to acknowledge and credit the following authors and publishers for the use of their work in the Maine Educational Assessment.**

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Sources of the exercises selected for this test include: Maine State Advisory Committees, Measured Progress, and previous Maine state testing programs.