



November 19, 1998

Janet Bagsby
MSDE
200 W. Baltimore St.
Baltimore, MD 21014

Dear Janet,

Enclosed are the 200 copies of each prototype booklets, along with 200 copies of each piece of ancillary material.

Please refer to the attached sample to see the order in which the materials were sent to the districts. The order is as follows:

1. Letter to Superintendents
2. Instructions to Principals-
Instruction for Distributing Prototype Booklets & Surveys
3. Overview (3 pages)
4. Prototype Booklets
(Algebra, Geometry, English I, Biology & Government)
5. Reference Sheet
(Algebra & Geometry only)
6. Supplemental Directions for Mathematics Teachers
(Algebra & Geometry)
7. Answer Keys
(Algebra, Geometry, English I, Biology & Government)
8. Surveys

Return envelopes and labels for the surveys were also enclosed, as well as a packing list.

Sincerely,

A handwritten signature in black ink, appearing to read "Rhonda Clymer".

Rhonda Clymer
Program Manager



TO: Maryland Assistant Superintendents of Instruction
FROM: CTB/McGraw-Hill
SUBJECT: Maryland High School Assessment Prototype Items
DATE: November 20, 1998

Enclosed are copies of prototype test items for the Maryland High School Assessment. The prototype items are examples of the item formats being developed to measure the Core Learning Goals in five courses: English I, Algebra, Geometry, Biology, and Government. Two copies of each of the five booklets are provided. One copy has pages printed on each side of every page to show how the booklet should be printed. The other copy is for making additional photocopies.

The prototype items are not secure materials. They are intended to be used by Maryland teachers to familiarize students with the item formats in each of the five content areas. The prototype items provide administrators and teachers with their first look at the new high school assessments.

This packet includes introductory information (referred to as the "Overview") that should be photocopied and distributed with each prototype booklet, an answer key for the selected-response items, and several copies of a survey document. Please send one photocopy of each of the five prototype item booklets (including the Overview and answer key) to each high school in the district. The surveys are machine-scorable documents; please do not make photocopies of them. Send an appropriate quantity of the surveys to each high school for teachers to complete. You may open packages of survey documents for distribution to schools. Also enclosed is a one-page document, "Instructions for Distributing Prototype Booklets and Surveys." This document should be sent to principals, as it contains essential information for photocopying and distributing materials. The name of the person to whom the surveys should be sent and the deadline date should be filled in at the bottom before making and distributing photocopies.

Maryland teachers wrote the prototype items in July and August of 1998. Beginning in March of 1999, Maryland teachers will write the items that will be field-tested in January and May of 2000. The information received from the surveys will be used in the item development workshops in the spring and summer. All responses will remain anonymous.

Please encourage teachers to administer the items to students and to complete the survey. For students who are completing the course, the items may be administered as they appear in the booklet. For other students, the items may be administered as part of classroom instruction or as the content measured by the items is covered during the course.

Central office instructional supervisors and building administrators are also encouraged to review the items and complete the survey as appropriate. Please make arrangements with your schools to return the completed surveys to you. We ask that you return the completed surveys to CTB/McGraw-Hill for processing. Return envelopes will be sent to you during the first week of January. The envelope should be mailed no later than January 21, 1999, for the information to be used in the March item writing workshops. A second return date will be May 14, 1999. We encourage the completion and return of as many surveys as possible in January. The prototype booklets should not be returned.

The Maryland State Department of Education is also interested in receiving written comments regarding the prototype items. Written comments may be sent to the Maryland State Department of Education, Assessment Office, Attn: George Newberry, 200 West Baltimore Street, Baltimore, MD 21201.



Instructions for Distributing Prototype Booklets and Surveys

- The prototype item booklets should be distributed to teachers in the following courses: English 1, Algebra, Geometry, Biology, and Government. Middle school teachers providing instruction in these courses should be included in the distribution.
- Booklets, ancillary materials (overview, answer keys, Formula Reference Sheet, Directions for Completing the Answer Grids), and surveys should be distributed to the teachers instructing in the course, principals, and content supervisors for review.
- Prototype item booklets must be photocopied (two-sided) with two staples on the left side. This will create a test booklet that opens flat. **Survey documents are machine-scorable; therefore, they cannot be photocopied.** Teachers or others who will be photocopying and distributing prototype materials should be given these instructions.
- Each teacher should receive:
 - Overview
 - A copy of the prototype booklet for the respective course
 - Appropriate answer key
 - Survey
- Algebra and Geometry teachers will also need copies of the:
 - Formula Reference Sheet
 - Directions for Completing the Answer Grids
- Each student in the appropriate courses should receive one copy of the following:
 - Prototype Booklet (photocopied 2-sided with 2 staples on left side)
- Students in Algebra and Geometry courses **MUST** receive each of the following in addition to a prototype test booklet:
 - Formula Reference Sheet
 - Directions for Completing the Answer Grids
- Return completed surveys to _____ by _____.

PLEASE DISTRIBUTE WITH THE PROTOTYPE ITEMS

Overview of the Maryland High School Assessment Prototype Items

This packet contains prototype items for the Maryland High School Assessment. Tests are being developed to measure the Core Learning Goals in five courses: English I, Algebra, Geometry, Biology, and Government. Items for these tests will be field-tested during the 1999–2000 school year. The prototype items in this booklet illustrate the types of items that are being considered for the High School Assessment.

Maryland high school teachers wrote these prototype items, and CTB/McGraw-Hill and the Maryland State Department of Education (MSDE) edited them. Committees of Maryland educators also reviewed the items. The purpose of these prototypes is to determine whether items like these are appropriate for measuring the Core Learning Goals. Teachers throughout Maryland have the opportunity to review the prototypes, administer them to students, and provide feedback to CTB and MSDE.

There are three types of test items: selected response (multiple-choice), brief constructed response, and extended constructed response. Brief constructed-response items are designed to be answered in 5 to 15 minutes; extended constructed-response items should take 10 to 30 minutes to answer, depending on the content area. In addition to these three types of items, the Algebra and Geometry tests have student-produced response items. In this type of item, students mark their answers in response grids. The answer key for the selected-response and student-produced response items is included in this packet. The scoring rubrics for the brief constructed-response and extended constructed-response items are being developed and are not available at this time.

A survey is also being conducted to collect information from Maryland educators. It is important to emphasize that the prototype items—not the students—are being evaluated at this time. These are examples of some of the survey questions:

- Do the items measure content taught in the course?
- Do the items appear to measure higher-level thinking skills?
- Do students understand the items and the directions?
- Do students understand the vocabulary and language in the items?
- Are the stimulus materials (reading passages, graphics, etc.) appropriate for measuring the course content?

The answers to these and other questions in the survey will help CTB and MSDE evaluate the items that are being proposed for the test. Surveys are being distributed to teachers throughout the state. Educators who do not teach students in the five content areas may also review the items and respond to the survey. Surveys will be collected during two periods: January 18–22 and May 10–14, 1999. Please return your completed survey to the designated person in your school district. MSDE invites educators to submit written comments, particularly regarding individual items. Written comments should be sent to MSDE at the address listed at the end of this section.

PLEASE DISTRIBUTE WITH THE PROTOTYPE ITEMS

How to Use the Prototypes

CTB and MSDE recommend that the prototype items be administered to students in order to judge the quality and difficulty of the items. Your feedback about students' experiences will be very helpful to us as we finalize the high school assessments. It is important that students do their best work on these items so we can get accurate information about the quality of the items. Encourage your students to do their best work!

Of course, teachers should review the content of the items before administering them to ensure that students have been exposed to the content being measured. Students who are completing the course may be asked to respond to the items as they appear in the booklet. In other settings, students may be asked to respond to only a portion of the items. In either case, your input will be valuable to us. Eventually, prototype items will be available to anyone to use at any time during the year.

While the students are responding to the items, circulate, make observations, and take notes of any questions the students ask. It is appropriate to answer questions that will help clarify the directions. It is not appropriate to answer questions that will help students answer the items. When giving students directions for answering the items, please review the meaning of the clock icons located next to the constructed-response items. Explain to the students that the clock icon identifies the anticipated amount of time necessary for students to answer each constructed-response item. These are only *suggested* amounts of time. Encourage students to take the time they need to answer the constructed-response items completely. Emphasize to students that correct and complete answers are important. CTB and MSDE need to know if the suggested amount of time to complete constructed-response items is sufficient.

After the students have completed the tests, we encourage you to discuss the items with the students:

- Were the directions clear and understandable?
- Did you understand what each item was asking you to do?
- Did the items cover topics that have been taught in class?
- Were the reading selections or graphics interesting?
- How long did it take you to answer the open-ended questions?
- Were the clock icons indicating the suggested amount of time helpful?
- Was the suggested amount of time to complete each constructed-response item sufficient?
- Which questions seemed easy or difficult?

Next Steps

Teachers' responses to surveys will be analyzed to determine if the item formats should be modified in any way. Prototype items that are determined to be of high quality will be posted on the MSDE Internet web site in spring 1999. Scoring rubrics for the constructed-response items and sample student responses to these items will also be posted. Maryland teachers may then use

PLEASE DISTRIBUTE WITH THE PROTOTYPE ITEMS

the prototype items, rubrics, and sample student responses to help prepare students for the High School Assessment.

Questions or Comments

Please direct your questions, comments, or concerns about the prototype items or the High School Assessment to the Maryland State Department of Education, Assessment Office, 200 West Baltimore Street, Baltimore, MD 21201.

**MATERIALS
TO
COPY**

**Maryland High School
Assessment Prototype**

**1 COPY
FOR
EACH
PRINCIPAL**

**Contents: Instruction for distributing
Prototype Booklets & Surveys (checklist)**



Instructions for Distributing Prototype Booklets and Surveys

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**1 COPY
FOR EACH
TEACHER
&
FOR EACH
PRINCIPAL**

Contents: 3 page letter- Overview

**Overview of the
Maryland High School Assessment Prototype Items**

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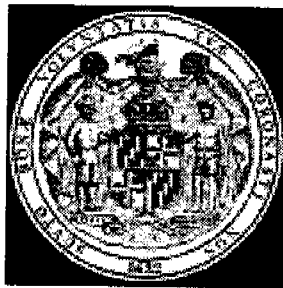
**1 COPY
FOR EACH
STUDENT
(or classroom sets)
&
STAFF
AS NEEDED**

Contents:

- 1. Prototype Booklets**
(Algebra, Geometry, English I,
Biology & Government)
- 2. Reference Sheet**
(Algebra & Geometry only)
- 3. Supplemental Directions for
Mathematics Teachers**
(Algebra & Geometry)

Maryland

High School Assessment Program



Biology

Prototype Items

1998-1999

Directions

The questions in this booklet are samples of the kinds of questions that might appear on future Biology tests for the Maryland High School Assessment. There are two types of test questions: multiple-choice and open-ended. Some of the open-ended questions require short written answers. Other questions require longer written answers.



When you see this symbol next to a question, you should expect to take about 5 minutes to answer.



When you see this symbol next to a question, you should expect to take about 10 minutes to answer.

You should do your best to answer each question completely and correctly. You may need to use more or less time than is expected to answer each question. You should write your answer within the available space. You may not need to use all of the lines that are provided for writing your answer.

The answer choices for the multiple-choice questions are labeled ABCD or FGHIJ. If your teacher has directed you to write your answers in the test booklet, then completely fill in the bubble to indicate your answer choice. If you are using a separate piece of paper to write your answers, be sure to write the letter that is next to the answer choice you choose.

Biology

Directions

Read the description of the experiment and use the table of results below to answer Numbers 1 and 2.

A student designed an experiment using 125 radish seeds and 5 petri dishes. Each petri dish contained a filter paper disk moistened with 5 ml of water. She placed 25 seeds in each petri dish and recorded the results four days later.

Dish Number	Temperature (°C)	Light Intensity (lux)	Number of Seeds Sprouted
1	0	1500	0
2	15	1500	11
3	30	1500	23
4	45	1500	9
5	60	1500	0

1 Which of these questions is the student trying to answer?

- Ⓐ Does temperature affect the number of seeds that sprout?
- Ⓑ Does light intensity affect the temperature of the dish?
- Ⓒ Does light intensity affect the number of seeds that sprout?
- Ⓓ Does temperature affect the light intensity needed by the seeds?

2 Which of these instruments would the student most likely use to measure the 5 ml of water accurately in this experiment?

- Ⓐ a flask
- Ⓑ a beaker
- Ⓒ a test tube
- Ⓓ a graduated cylinder

Directions

Use the information below to answer Numbers 9 and 10.

ULTRAVIOLET RADIATION IS KILLING AMPHIBIANS

It is widely known that ultraviolet radiation (UV) causes damage to cells by altering the physical structure of DNA and proteins. Over the last six years, biologists have reported that many of the world's 4,500 known species of amphibians are declining in number. Some species have nearly disappeared. Hard-hit areas include desert, rain forest, lowland, and mountain environments in the western United States, Australia, and Central and South America.

Researchers have shown that UV radiation passing through Earth's thinning ozone layer is responsible for a worldwide decline in frogs, toads, and salamanders. The impact of UV radiation on some frog and toad eggs was reported by a team of researchers from Oregon State University. The basic conclusion is that UV radiation kills frog eggs in nature. The researchers performed field experiments which showed that when UV radiation is filtered out, the frog eggs hatch more quickly and successfully, and the death rate is lowered.

The researchers need more information to help determine the cause of the decline in the numbers of amphibians. Follow-up studies are being planned to get additional information to test their theory that UV radiation kills the eggs of amphibians.

9

Which of these additional studies would best support the claim that increases in UV radiation are responsible for a decline in the population of amphibians?

- Ⓐ The birth rates of amphibians should be compared with those of animals that are not as sensitive to UV radiation.
- Ⓑ The death rates of amphibians should be compared with those of animals that are not as sensitive to UV radiation.
- Ⓒ Field measurements of UV radiation should be made in regions of the world where the amphibian populations are declining.
- Ⓓ Field measurements of UV radiation should be made in regions of the world where the amphibian populations are declining and in regions where they are stable.

10

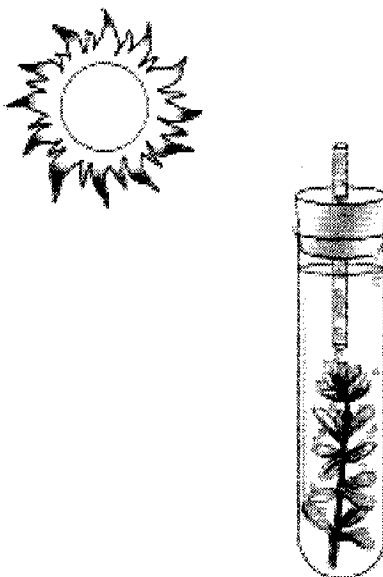
The field researchers claim that by filtering out UV radiation, frog eggs hatch more quickly and have a higher survival rate. Which of these should be done to improve their study?

- Ⓐ show that ozone levels are higher in hard-hit areas of the world
- Ⓑ determine if increases in hatching rates lead to a decrease in survival rates
- Ⓒ show that DNA damage in frog eggs is increased by filtering out UV radiation
- Ⓓ control for other variables in the local environment that might affect amphibian reproduction

Directions

Use the information below to answer Numbers 11 through 13.

A sprig of *Elodea* was placed in a test tube as shown below. The test tube was then placed in sunlight for 6 hours.



11 The bubbles of gas in the diagram are composed mainly of

- Ⓐ carbon monoxide
- Ⓑ carbon dioxide
- Ⓒ nitrogen
- Ⓓ oxygen

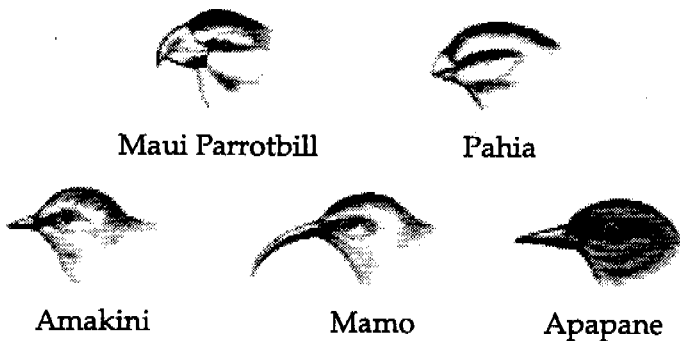
12 The bubbles of gas in the diagram are mostly a result of

- Ⓐ photosynthesis
- Ⓑ chemosynthesis
- Ⓒ aerobic respiration
- Ⓓ anaerobic respiration

13 In the leaves of the *Elodea* plant, energy from the sun is first used to make

- Ⓐ lipids
- Ⓑ proteins
- Ⓒ nucleic acids
- Ⓓ carbohydrates

- 22** The diagram below shows a variety of bird species found on an island. Despite differences in beak structure, these species probably developed from a single species that migrated to the island.



Which of these is not an accurate conclusion regarding the shapes of the birds' beaks?

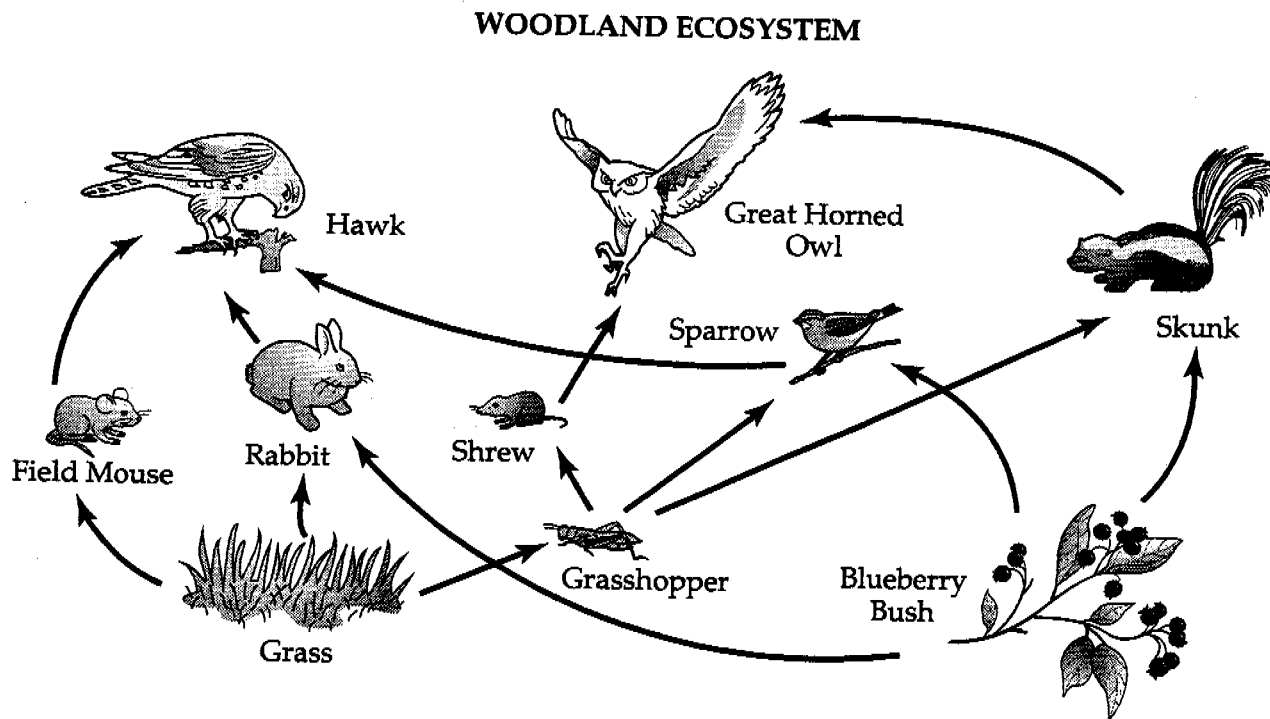
- A New combinations of genes resulted in a variety of beak shapes.
- B Each beak shape is well adapted for obtaining particular types of food.
- C The birds grew different beak shapes so that they could eat the available foods.
- D The various beak shapes increased the likelihood of each species' survival.

- 23** Which of these is the correct order of steps in gene expression?

- A RNA → DNA → protein
- B RNA → protein → DNA
- C DNA → RNA → protein
- D DNA → protein → RNA

Directions

Use the diagram of the woodland ecosystem below to answer Numbers 24 through 27.



24 Which term best describes the role of the skunk in the woodland ecosystem?

- Ⓐ omnivore
- Ⓑ carnivore
- Ⓒ herbivore
- Ⓓ decomposer

25 The relationship between the hawk and the rabbit is best described as

- Ⓐ mutualism
- Ⓑ parasitism
- Ⓒ predator-prey
- Ⓓ producer-consumer

26 What would be the result of an increase in the population of grasshoppers?

- Ⓐ an increase in the population of sparrows, shrews, and skunks
- Ⓑ a decrease in the quantity of grass; increase in the quantity of blueberry bushes
- Ⓒ an increase in the population of rabbits and field mice
- Ⓓ a decrease in the population of both hawks and owls

Maryland

High School Assessment Program



Algebra

Prototype Items

1998-1999

Directions

The questions in this booklet are samples of the kinds of questions that might appear on future Algebra tests for the Maryland High School Assessment. There are three types of test questions: multiple-choice, student-produced response, and open-ended. You will be provided with separate directions for the student-produced response questions. Some of the open-ended questions require short written answers. Other questions require longer written answers.



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When you see this symbol next to a question, you should expect to take about 10 minutes to answer.

You should do your best to answer each question completely and correctly. You may need to use more or less time than is expected to answer each question. You should write your answer within the available space. You may not need to use all of the lines that are provided for writing your answer.

The answer choices for the multiple-choice questions are labeled ABCD or FGHI. If your teacher has directed you to write your answers in the test booklet, then completely fill in the bubble to indicate your answer choice. If you are using a separate piece of paper to write your answers, be sure to write the letter that is next to the answer choice you choose.

Student-Produced Response Questions

Several questions in this test require you to enter your answer on a special grid like the one shown below.

	/	/	/	/										
	•	•	•	•										
0	0	0	0	0										
1	1	1	1	1										
2	2	2	2	2										
3	3	3	3	3										
4	4	4	4	4										
5	5	5	5	5										
6	6	6	6	6										
7	7	7	7	7										
8	8	8	8	8										
9	9	9	9	9										

Directions for Completing the Response Grids

1. Find the answer to the problem.
2. Write your answer in the boxes at the top of the grid.
 - Print your answer with the first digit (or symbol) in the left answer box, or with the last digit in the right answer box.
 - Print no more than one digit or symbol in each answer box. Do not leave a blank answer box in the middle of an answer.
 - Be sure to write a decimal point or fraction bar in the answer box if it is part of the answer.
3. Fill in the appropriate bubble under each box in which you wrote your answer.
 - Fill in only one bubble for each answer box used in your answer. Do not fill in a bubble under an unused answer box.
 - You must fill in the bubbles accurately to receive credit for your answer.

Examples of Valid Responses

The answer grids below show valid ways to enter an answer of $\frac{3}{2}$.

		3	/	2	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

3	/	2			
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

1	.	5			
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

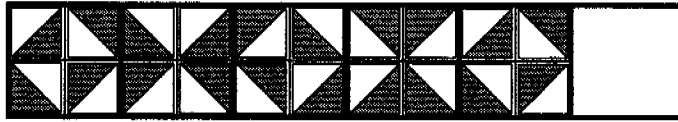
	1	.	5		
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Special Directions for Mixed Numbers, Decimals, and Negative Numbers

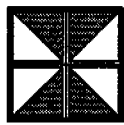
- Mixed numbers must be entered as decimals or improper fractions. For example, an answer of $1\frac{1}{2}$ should be entered as 1.5 or $\frac{3}{2}$.
- Decimal answers should be entered as accurately as possible unless otherwise indicated in the problem.
- No Student-Produced Response questions have negative answers.

Algebra

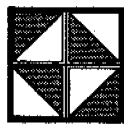
The diagram below shows a section of tiles from a kitchen floor design.



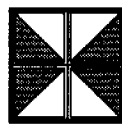
Which tile should be placed next?



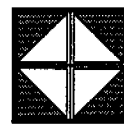
(A)



(B)



(C)



(D)

Look at the table below.

x	y
-1	7
0	3
1	-1
2	-5

Which equation describes the relationship between x and y ?

- (F) $y = x + 3$
- (G) $y = x - 4$
- (H) $y = 4x - 3$
- (I) $y = -4x + 3$



Fractals are patterns that are used in science to understand various forms in nature, including the branching structures of trees. The pattern starts with two branching line segments (Stage 1). Two new branches are then added to the end of each previous branch.



Stage 1



Stage 2



Stage 3

- In the space below, draw the branch structure for Stage 4.

Stage 4

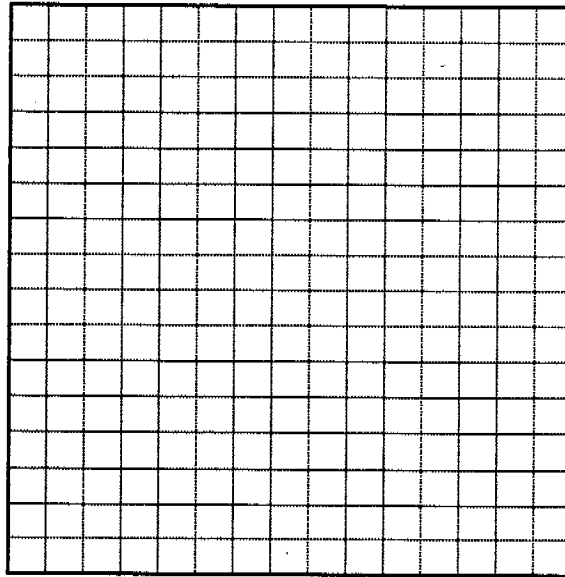
- Complete the table below to show the number of new branches added at each of the first 6 stages.

FRACTAL PATTERN

Stage Number	Number of New Branches
1	2
2	4
3	8
4	
5	
6	

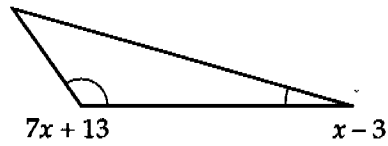


- Graph the number of new branches as a function of the stage number on the grid.



- Should the points on your graph be connected? Justify your answer.

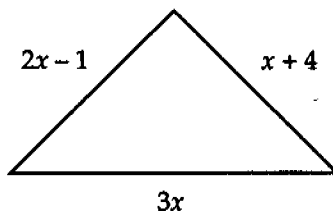
The sum of the measures of the angles of a triangle is 180° .



Which expression represents the measure of the third angle in the triangle above?

- Ⓐ $170 - 8x$
- Ⓑ $8x + 10$
- Ⓒ $190 - 8x$
- Ⓓ $8x - 170$

The relationship between the three sides of a triangle is shown in the diagram below.



If the perimeter of the triangle is 24 inches, what is the value of x ?

- Ⓐ $3\frac{1}{6}$
- Ⓑ $3\frac{1}{2}$
- Ⓒ $4\frac{1}{2}$
- Ⓓ $4\frac{5}{6}$

Jolene wants to purchase a television that costs \$250. She has \$25 now and will be able to save \$15 each week. The television model has been discontinued, and the price will be reduced by \$10 each week until it is sold. After how many weeks will Jolene have saved enough money to buy the television?

- | | | | |
|---|---|----|----|
| 8 | 9 | 10 | 15 |
| Ⓕ | Ⓖ | Ⓗ | Ⓙ |

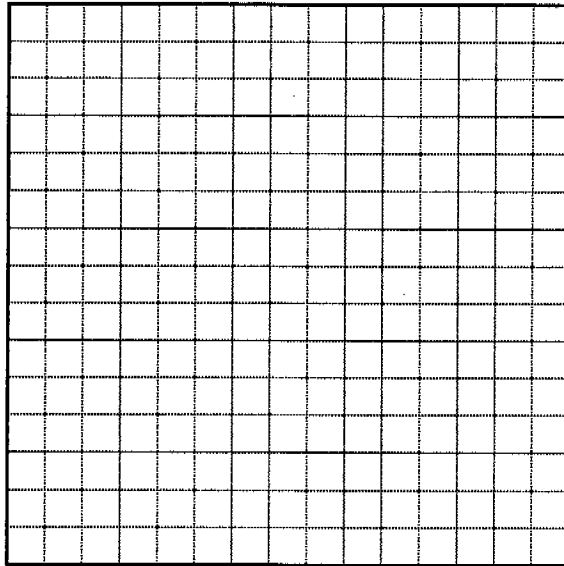


The Ride Right Cab Company charges \$2.15, plus \$0.50 per mile for a cab ride. The Flyer Cab Company charges \$1.25, plus \$0.65 per mile.



- For each company, write an equation that represents the total cost of a cab ride. Let t be the total cost of the cab ride and m be the number of miles driven.

- On the grid below, graph the equations you wrote.



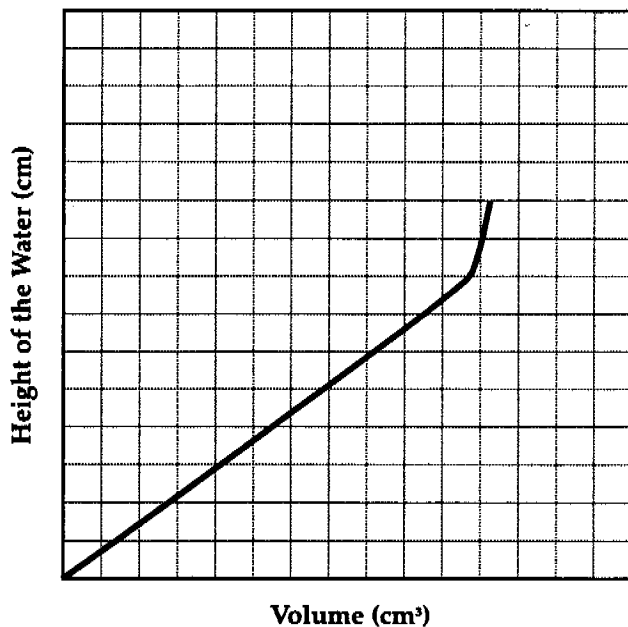
-
- For what distance would the cost of a cab ride be the same for both companies? Explain how you determined the answer. Use words, symbols, or both in your explanation.

- What is the cost for a ride of this distance?

8

The graph below represents the height of water in a container as a function of the volume of water.

HEIGHT AND VOLUME OF WATER IN A CONTAINER



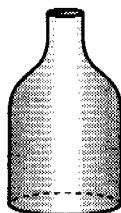
Which container was most likely used to create the graph above?



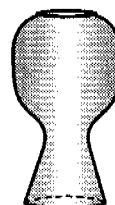
F



G

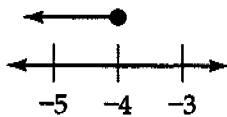


H



J

Given the inequality $-12 < 3x$, which number line below represents the graph of the solution?



(A)



(B)



(C)



(D)

Luisa was asked to graph this system of equations.

$$y = \frac{2}{3}x + 2$$

$$2x - 3y = -9$$

Which of these correctly describes the graphs of the two equations above?

- (F) They intersect at (2, 3).
- (G) They intersect at (3, 2).
- (H) They are parallel lines.
- (J) They are both the same line.



Hanz and Mario went to a sale at a music store where all CDs were one price and all cassettes were another price. Hanz bought 2 CDs and 2 cassettes for \$40, while Mario bought 1 CD and 4 cassettes for \$44.

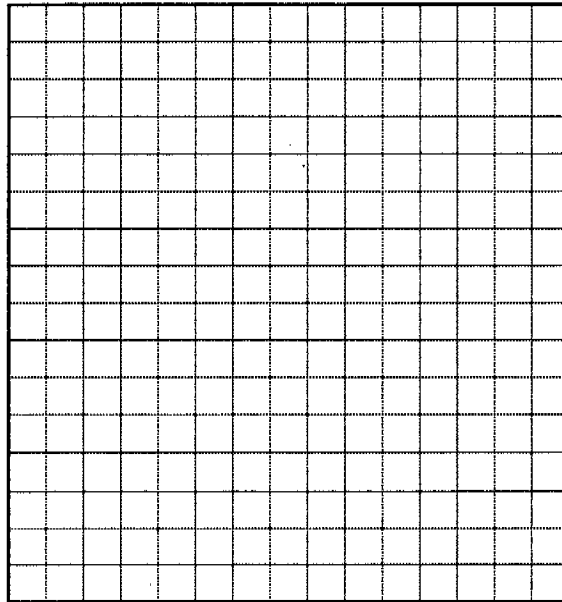


The equations below represent these purchases, where x is the cost of a CD and y is the cost of a cassette.

$$2x + 2y = 40$$

$$x + 4y = 44$$

- What are the costs of a single CD and a single cassette? Solve the system of equations by either constructing a graph on the grid or by using an algebraic process. Explain how you determined the costs. Use words, symbols, or both in your explanation.





12

Sarah has \$135 in her savings account. Tracy has \$150 in her savings account. Each week Sarah saves \$8 and Tracy saves \$5. After how many weeks will they each have the same amount of money?

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

13

All 15 students in Joe's English class must give an oral report. The teacher randomly selects 1 student each day to present his or her report. If by the end of the third day Joe has not been selected, what is the probability that the teacher will select Joe on the fourth day?

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





The table below shows the results of a survey given to 100 randomly selected seniors at Willis High School concerning their plans after graduation.

PLANS AFTER GRADUATION

Activity	Number of Students
Attend 2-year college	36
Attend 4-year college	21
Attend technical school	17
Join the military	5
Work full time	14
Other	7

Use this data to predict the probability that a senior at Willis High School plans to join the military after graduation.

/	/	/		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9



Jackson High School and Sorenson High School are being joined to form one high school. The matrices show the student population for each school.

NUMBER OF STUDENTS

Jackson High School					Sorenson High School				
	Fresh.	Soph.	Jr.	Sr.		Fresh.	Soph.	Jr.	Sr.
Girls	213	207	197	184	Girls	113	108	96	91
Boys	198	203	201	181	Boys	130	112	92	87

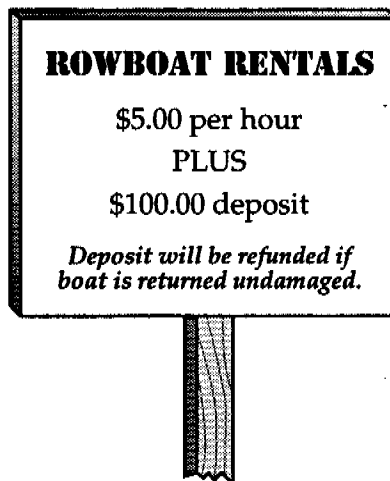
When the school populations are combined, which group will be the largest?

- Ⓐ Freshman boys
- Ⓑ Sophomore girls
- Ⓒ Junior boys
- Ⓓ Senior girls



17

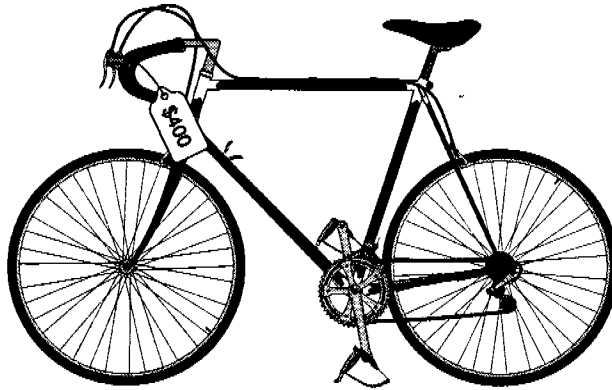
Look at the sign below.



Which equation below represents the total cost for renting and returning a rowboat undamaged? Let c be the total cost in dollars and t be the time in hours.

- Ⓐ $c = 5t + 100$
- Ⓑ $c = 500t$
- Ⓒ $c = 100t + 5$
- Ⓓ $c = 5t$

Look at the bike below.



Ted wants to buy the bike. The bike costs \$400. He has two options for payment.

Option One: Ted can borrow the \$400 from his father and repay him \$40 a month for a year.

Option Two: The bike shop will finance the bike for one year at a 15% annual interest rate. The formula for the total amount paid (a) is $a = p + prt$, where p is the amount borrowed, r is the rate of interest, and t is the time in years.

- Which option would cost Ted the least amount of money? Explain how you determined your answer. Use words, symbols, or both in your explanation.

19

The table below shows statistical measures for the number of hours per week several students watched television over a 9-week period.

HOURS OF TELEVISION VIEWING

	Mean	Median	Mode	Maximum Number of Hours	Minimum Number of Hours
Student A	16	16	15	18	14
Student B	9	10	6	14	5
Student C	18	18	9	28	6
Student D	14	12	12	16	8

Which student was most consistent in the number of hours of television watched from week to week?

- A Student A
- B Student B
- C Student C
- D Student D

20

Samantha transferred from her original algebra class to a new algebra class. Because of Samantha's transfer, the mean test score was raised in both classes. What must be true about Samantha's mean test score in each class in order for this to happen?

- A Samantha's mean test score was below the original class mean and above the new class mean.
- B Samantha's mean test score was below both class means.
- C Samantha's mean test score was above the original class mean and below the new class mean.
- D Samantha's mean test score was above both class means.





Kim is the manager of two fast-food restaurants. She needs to place one order that will cover a 3-month supply of cups for both restaurants. The matrices below show the number of hot and cold drinks sold at both restaurants for one month. Different types of cups were used for hot and cold drinks.

NUMBER OF CUPS				NUMBER OF CUPS			
Restaurant A				Restaurant B			
	Small	Medium	Large		Small	Medium	Large
Hot Drinks	43	88	57	Hot Drinks	51	93	62
Cold Drinks	92	42	15	Cold Drinks	95	63	22

- How many cups of each size and type should Kim order for the next 3 months? Explain how you determined the number of cups of each size and type. Use words, symbols, or both in your explanation.





A random sample of 100 students at Heritage High School voted on a school mascot. The table below shows the results of the vote.

MASCOT VOTES

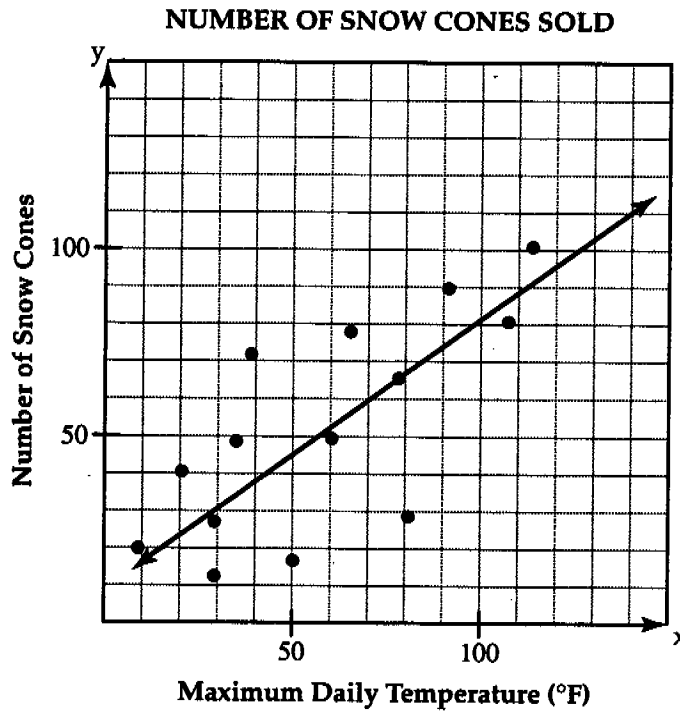
Mascot	Tiger	Lion	Dolphin	Hawk
Number of Votes	19	22	17	42

The total population of the school is 1,550. Predict how many students at Heritage High School want the mascot to be the lion.

- Ⓐ 22
- Ⓑ 42
- Ⓒ 341
- Ⓓ 651



The graph below shows a line of best fit for data collected on the number of snow cones sold as a function of the maximum daily temperatures.



Use the line of best fit to predict the number of snow cones that would be sold on a day with a maximum temperature of 90° .

60

(A)

72

(B)

82

(C)

90

(D)

A line has a slope of $\frac{2}{3}$ and passes through the point $(-6, 3)$. What is the equation of this line?

(F) $y = 6x + 3$

(G) $y = 3x + 6$

(H) $y = \frac{2}{3}x + 7$

(I) $y = \frac{2}{3}x - 1$

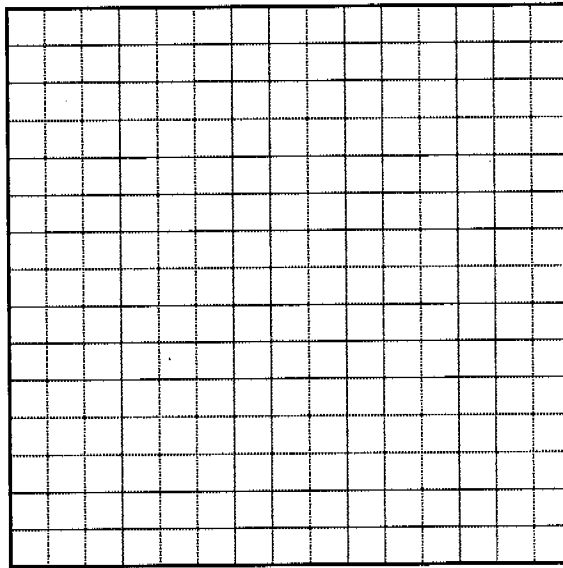


The function below describes the stopping distance in feet (d) for a car that is traveling at a speed of s miles per hour.



$$d = 0.5s^2 + 2.1s$$

- Graph the function on your graphing calculator. Use the domain of $0 \leq x \leq 70$ and a range of $0 \leq y \leq 3000$. Sketch the graph on the grid below.



- Use the graph to describe the relationship between the speed of a car and its stopping distance.



-
- Estimate the stopping distance, in feet, of a car traveling 60 miles per hour. Explain how you determined the stopping distance. Use words, symbols, or both in your explanation.



26

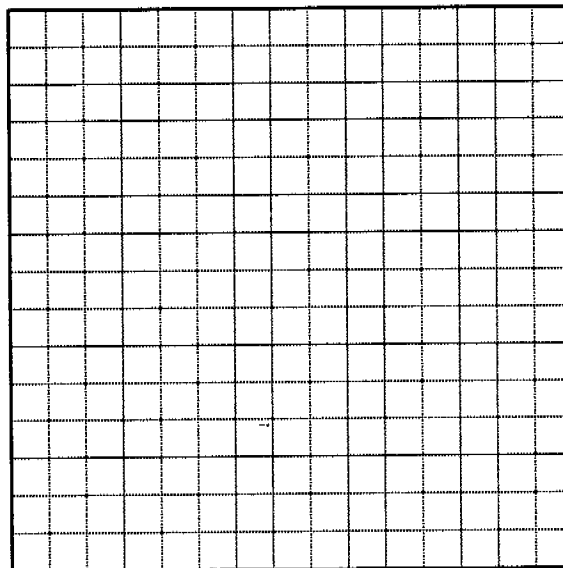
An environmental science class is studying the effect of population growth on pollution. The teacher has provided the following population data for the state of Maryland.



MARYLAND POPULATION

Population Year	Residents (in millions)
1940	1.82
1950	2.34
1960	3.10
1970	3.92
1980	4.22
1990	4.78

- Use the data from the table to create a scatterplot on the grid.



-
- Write the equation for the line of best fit. Explain how you determined the equation. Use words, symbols, or both in your explanation.

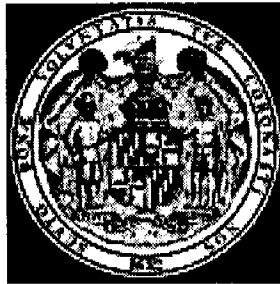
- Use the equation for the line of best fit to predict the population in the year 2010. Explain how you determined the population. Use words, symbols, or both in your explanation.

- Would this model be useful for calculating the population for the year 1800? Justify your answer.



Maryland

High School Assessment Program



English I

Prototype Items

1998-1999

Directions

The questions in this booklet are samples of the kinds of questions that might appear on future English I tests for the Maryland High School Assessment. There are two types of test questions: multiple-choice and open-ended. Some of the open-ended questions require short written answers. Other questions require longer written answers.



When you see this symbol next to a question, you should expect to take about 10 minutes to answer.



When you see this symbol next to a question, you should expect to take about 15 minutes to answer.



When you see this symbol next to a question, you should expect to take about 30 minutes to answer.

You should do your best to answer each question completely and correctly. You may need to use more or less time than is expected to answer each question. You should write your answer within the available space. You may not need to use all of the lines that are provided for writing your answer.

The answer choices for the multiple-choice questions are labeled ABCD or FGHI. If your teacher has directed you to write your answers in the test booklet, then completely fill in the bubble to indicate your answer choice. If you are using a separate piece of paper to write your answers, be sure to write the letter that is next to the answer choice you choose.

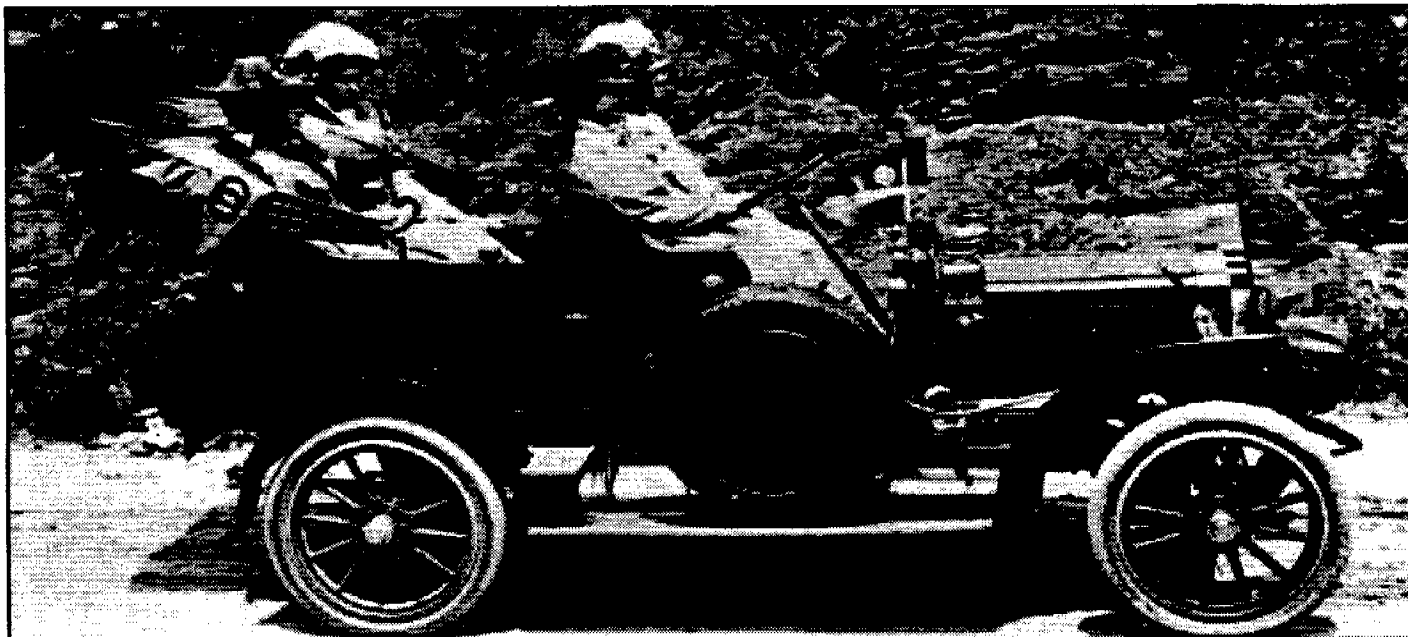
English

Directions

Read the article *From Coast to Coast*. Then answer Numbers 1 through 9.

From Coast to Coast

by Louise Boyd James



On June 9, 1909, twenty-one-year-old Alice Ramsey impatiently answered questions and posed for pictures in a torrential rainstorm at the New York City Maxwell¹ automobile headquarters. Suddenly she announced, "If we're going to go, let's go." She cranked the four-cylinder, thirty-horsepower touring car to life and climbed behind the right-hand-drive steering wheel. With a last kiss for her husband, John, Ramsey and her three women passengers (two sisters-in-law and one family friend) began a historic journey of four thousand miles from New York City to San Francisco, making her the first woman to drive an automobile across the United States.

Alice Ramsey, seated behind the steering wheel, was the first woman to drive a car across the United States. She was accompanied by her husband's sisters, Margaret Atwood and Nettie Powell, and by Hermine Jahns, a family friend.

In 1909, there were few paved or marked highways, only a scattering of service stations, and no road maps as we know them. A coast-to-coast trip was an adventure, one that only about two dozen automobiles—all driven by men—had completed.

¹ **Maxwell:** automobile manufactured in the United States between 1904 and 1925

Few women drove cars, and some doctors had suggested it was dangerous for women even to ride in them. They said that women became too excited at speeds of fifteen to twenty miles an hour and would be unable to sleep at night. There was also the danger of "automobile face"—a perpetually open mouth that resulted in sinus trouble! Thus, many people believed that Alice Huyler Ramsey would be unable to complete her transcontinental trip. But this young woman was determined, saying, "I'll drive every inch of the way—if it kills me!"

The easiest part of the journey was from New York City to Chicago. Roads were best in this part of the country, even though many were designed for horses and wagons, not cars. Travel went so smoothly on the Cleveland Parkway, between Cleveland and Toledo, Ohio, that Ramsey reached her top speed of forty-two miles per hour.

Travel east of the Mississippi River was guided by the Blue Book, which gave directions and mileage from one town to another. But even the Blue Book could be wrong, as Ramsey discovered. Outside of Cleveland, it had directed: "At 11.6 miles, yellow house and barn on rt [right]. Turn left." There was no yellow house and barn; both were painted green. The man who owned them disapproved of automobiles and had hoped the changed colors would confuse drivers. Alice reached Chicago, one-third of her journey, in two weeks. From there west, there was no Blue Book, and the roads were much worse.

The trip was a promotion for the Maxwell Briscoe Motor Company. Officials had realized that a woman driving a Maxwell cross-country, over practically uncharted wilderness, was a great advertising opportunity. The auto company had furnished the forest-green car and hired J.D. Murphy as the advance man.

Murphy traveled ahead of Ramsey, usually by train. He arranged publicity, located gasoline and service stations, plotted the route, and found

food and lodging for the women. One morning their breakfast consisted of corn flakes, canned tomatoes, and coffee. Another day was started with lamb chops and chocolate cake.

Travel across Iowa was the worst. It rained for thirteen days, and Ramsey drove through mud, mud, mud. "Roads were horrible!" she said later. "The accumulated rains of the past several days had already soaked deep enough below the surface of the roads to render them bottomless. We plowed our way along, forced to keep the transmission in low gear most of the time."

When the roads began to dry, potholes remained. In many places, it was impossible to avoid these; Ramsey had to weave the Maxwell around them, hitting as few as possible. "The Maxwell careened² back and forth, diving in one direction, then another. Dodge a hole! Catch a breath! Now another! And another!" Ramsey wrote in her diary.

Once the right front and rear tires both got stuck in deep holes. Ramsey and Murphy jacked up the front wheel and used a fence post to force the rear wheel out. On one especially muddy section in Nebraska, the Maxwell was towed by a team of horses for thirteen miles. A dozen flat tires, a broken spring and two broken axles, and a sheared tie-rod bolt failed to stop Ramsey.

On August 7, sixty days after she had begun, Ramsey pulled into San Francisco amid a parade of honking Maxwells. She made the coast-to-coast trip at least thirty more times before her death, at age ninety-five. Alice Ramsey never had a traffic accident, and she received only one traffic ticket—for making a U-turn. In 1960, the Automobile Manufacturers Association named her Woman Motorist of the Century in honor of her adventurous spirit and contributions to the industry.

² careened: swerved

1 When previewing *From Coast to Coast*, which features most clearly identify this as a nonfiction article?

- Ⓐ the length and the author's name
- Ⓑ the title and the names of cities
- Ⓒ the photograph and its caption
- Ⓓ the use of details and quotations

2 Which of these best describes Alice Ramsey's personality?

- Ⓐ independent and determined
- Ⓑ hopeful but immature
- Ⓒ easygoing and sympathetic
- Ⓓ intelligent but careless

3 Which of these best describes the author's attitude toward Alice Ramsey?

- Ⓐ confusion about what she wanted
- Ⓑ concern for her safety
- Ⓒ admiration for what she did
- Ⓓ surprise at her success

4 Reading this article would most likely encourage a reader to

- Ⓐ support raising taxes to improve roads
- Ⓑ strive to exceed society's expectations
- Ⓒ learn to make automobile repairs
- Ⓓ understand the benefits of technology

Directions

Use this dictionary entry to answer Number 5.

pro•mo•tion *n.* 1. a raise in rank, grade, or position. 2. a raise in honor. 3. an advancement of a cause. 4. an attempt to sell or popularize a product.

The trip was a promotion for the Maxwell Briscoe Motor Company.

Which meaning of the word *promotion* is used in this sentence?

- Ⓐ definition 1
- Ⓑ definition 2
- Ⓒ definition 3
- Ⓓ definition 4

7 Read these sentences from the article.

They said that women became too excited at speeds of fifteen to twenty miles an hour and would be unable to sleep at night. There was also the danger of "automobile face"—a perpetually open mouth that resulted in sinus trouble!

What is most likely the reason the author included these sentences in the article?

- Ⓐ to emphasize the silliness of objections to women drivers
- Ⓑ to criticize the foolishness of Alice Ramsey's behavior
- Ⓒ to describe the challenges of early automobile travel
- Ⓓ to reveal the fears of Alice Ramsey and her companions

8 Read this sentence from the article.

In 1909, there were few paved or marked highways, only a scattering of service stations, and no road maps as we know them.

In this sentence, the pronoun *them* refers to

- Ⓐ highways
- Ⓑ scattering
- Ⓒ service stations
- Ⓓ road maps



Lined writing area consisting of 25 horizontal lines.



Directions

Read the story *Maud Martha Sparing the Mouse*. Then answer Numbers 10 through 13.

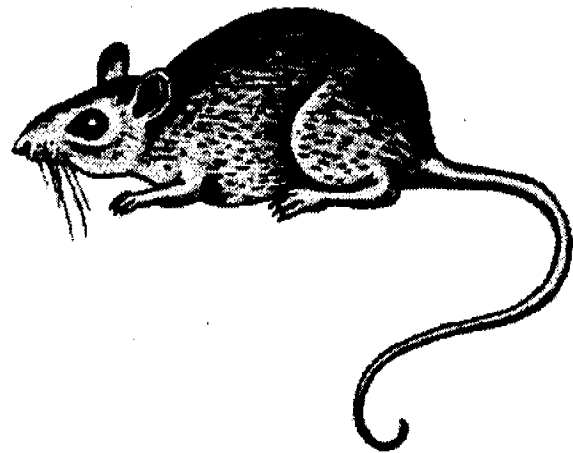
MAUD MARTHA SPARES THE MOUSE

by Gwendolyn Brooks

There. She had it at last. The weeks it had devoted to eluding her, the tricks, the clever hide-and-go-seeks, the routes it had in all sobriety devised, together with the delicious moments it had, undoubtedly, laughed up its sleeve—all to no ultimate avail. She had that mouse.

It shook its little self, as best it could, in the trap. Its bright black eyes contained no appeal—the little creature seemed to understand that there was no hope of mercy from the eternal enemy, no hope of reprieve or postponement—but a fine small dignity. It waited. It looked at Maud Martha.

She wondered what else it was thinking. Perhaps that there was not enough food in its larder. Perhaps that little Betty, a puny child from the start, would not, now, be getting fed. Perhaps that, now, the family's seasonal housecleaning, for lack of expert direction, would be left undone. It might be regretting that young Bobby's education was now at an end. It might be nursing personal regrets. No more the mysterious shadows of the kitchenette, the uncharted twists, the unguessed halls. No more the sweet delights of the chase, the charms of being unsuccessfully hounded, thrown at.



Maud Martha could not bear the little look. "Go home to your children," she urged. "To your wife or husband." She opened the trap. The mouse vanished.

Suddenly, she was conscious of a new cleanness in her. A wide air walked in her. A life had blundered its way into her power and it had been hers to preserve or destroy. She had not destroyed. In the center of that simple restraint was—creation. She had created a piece of life. It was wonderful.

"Why," she thought, as her height doubled, "why, I'm good! I am good."

She ironed her aprons. Her back was straight. Her eyes were mild, and soft with loving kindness.

- 10** Maud Martha imagines the mouse is "nursing personal regrets." (paragraph 3)

In this phrase, *nursing* means

- Ⓐ caring for
- Ⓑ trying to forget
- Ⓒ holding on to
- Ⓓ making excuses for

- 11** Read this quotation from the story.

No more the mysterious shadows of the kitchenette, the uncharted twists, the unguessed halls.

Which of these words is not used to modify another word in the quotation?

- Ⓐ mysterious
- Ⓑ kitchenette
- Ⓒ uncharted
- Ⓓ unguessed

- 12** Which of these quotations from the story is not a complete sentence?

- Ⓐ She had it at last.
- Ⓑ It might be regretting that young Bobby's education was now at an end.
- Ⓒ No more the sweet delights of the chase, the charms of being unsuccessfully hounded, thrown at.
- Ⓓ A wide air walked in her.

Directions

Read the poem *The Meadow Mouse*. Then answer Numbers 14 and 15.

The Meadow Mouse

by THEODORE ROETHKE

I

In a shoe box stuffed in an old nylon stocking
Sleeps the baby mouse I found in the meadow,
Where he trembled and shook beneath a stick
Till I caught him up by the tail and brought him in,
Cradled in my hand,
A little quaker, the whole body of him trembling,
His absurd whiskers sticking out like a cartoon-mouse,
His feet like small leaves,
Little lizard-feet,
Whitish and spread wide when he tried to struggle away,
Wriggling like a miniscule^o puppy.

5

10

11. miniscule: tiny

Now he's eaten his three kinds of cheese and drunk from
his bottle-cap watering-trough—
So much he just lies in one corner,



His tail curled under him, his belly big
As his head; his batlike ears
Twitching, tilting toward the least sound.

15

Do I imagine he no longer trembles
When I come close to him?
He seems no longer to tremble.

II

But this morning the shoe-box house on the back porch is
empty.

20

Where has he gone, my meadow mouse.
My thumb of a child that nuzzled in my palm?—
To run under the hawk's wing,
Under the eye of the great owl watching from the elm tree.
To live by courtesy of the shrike,^o the snake, the tomcat.

25 25. **shrike**: a violent, shrill-voiced bird of prey
26. **nestling**: baby bird

I think of the nestling^o fallen into the deep grass.
The turtle gasping in the dusty rubble of the highway,
The paralytic stunned in the tub, and the water rising—
All things innocent, hapless,^o forsaken.

29. **hapless**: unfortunate

14 Which word **best** describes the tone created by the phrases "like a cartoon-mouse" (line 7) and "little lizard-feet" (line 9) in Part I of the poem?

- Ⓐ mocking
- Ⓑ disgusting
- Ⓒ playful
- Ⓓ despairing

15 Which pair of words **best** describes how the poet wants the reader to feel toward the mouse?

- Ⓐ amused and joyful
- Ⓑ calm and confident
- Ⓒ humble and respectful
- Ⓓ protective and sympathetic

Directions

Now answer Numbers 16 through 19. Base your answers on both the story and the poem.

16 Which of these statements is true for both the story and the poem?

- Ⓐ The mice are caught when they invade a house.
- Ⓑ The mice return to their former environments.
- Ⓒ The humans have control over the release of the mice.
- Ⓓ The humans are comforted by the release of the mice.

17 Maud Martha's mouse and the meadow mouse are similar because both mice were

- Ⓐ at the mercy of humans
- Ⓑ trusting of humans
- Ⓒ driven by hunger into captivity
- Ⓓ resigned to their fate

18 In both the story and the poem, which of these emotions is most closely related to the theme?

- Ⓐ pride
- Ⓑ compassion
- Ⓒ confusion
- Ⓓ fear

Directions

Numbers 20 and 21 test your knowledge of writing and language. Choose the best response.

20 Read the sentences:

1. I am having trouble carrying this box.
2. It is heavy.
3. My friend gave the box to me.
4. This box contains glass jars.

Which of these is the best way to combine the four sentences into one?

- Ⓐ I am having trouble carrying this heavy box of glass jars which my friend gave me.
- Ⓑ I am having trouble carrying this box of glass jars which my friend gave me which is too heavy.
- Ⓒ This box containing glass jars, which my friend gave me, is heavy, so I am having trouble carrying it.
- Ⓓ Because this box of glass jars, which my friend gave me, is heavy, I am having trouble carrying it.

The information below is from a language handbook. Use it to answer Number 21.

Use the comma

- before *and, but, or, nor, for, so,* and *yet* when they link main clauses
- following introductory elements
- between items in a series
- to set off parenthetical elements, such as *on the other hand, in fact, therefore*

21 Read the sentence below.

The flag that inspired the "Star Spangled Banner" is, I believe, a national treasure and is on display at the Smithsonian.

Which of these is the correct way to punctuate the sentence?

- Ⓐ The flag, that inspired the "Star Spangled Banner" is, I believe a national treasure and is on display at the Smithsonian.
- Ⓑ The flag that inspired the "Star Spangled Banner" is I believe a national treasure, and is on display at the Smithsonian.
- Ⓒ The flag that inspired the "Star Spangled Banner" is, I believe a national treasure and is on display at the Smithsonian.
- Ⓓ Best as it is

Directions

For Numbers 22 through 27, choose the best answer to questions about how students should complete the following assignment.

After reading a novel set in the Great Plains states during the 1930s, students were given the assignment to write a paper about the eight-year drought in the region that became known as the dust bowl.

22 What should Marcus, a student in the class, do first in order to get ready to write?

- Ⓐ locate and research information
- Ⓑ write a first draft
- Ⓒ brainstorm ideas about the topic
- Ⓓ narrow and focus the topic

23 Darren, another student, wants his essay to include information from eyewitness accounts of the dust bowl.

Choose the book that will most likely contain eyewitness accounts and personal memoirs.

- Ⓐ *Children of the Dust Bowl: The True Story of the School at Weedpatch Camp*
- Ⓑ *Dust Bowl: The Great Plains in the 1930s*
- Ⓒ *The Dust Bowl: An Agricultural and Social History*
- Ⓓ *Farming the Dust Bowl: First-Hand Reports from Kansas*

24 Darren decides to compare eyewitness accounts of the dust bowl with the experiences of the characters in a novel he read in class.

Which choice of ideas and organization would best suit Darren's purpose in writing his essay?

- Ⓐ
 1. details in the novel
 2. quotations from people who experienced the dust bowl
 3. analysis of the similarities between them
- Ⓑ
 1. key events in the novel
 2. historical events of the dust bowl era
 3. famous people who lived during the dust bowl
- Ⓒ
 1. effects of the dust bowl as described in the novel
 2. changes in agricultural methods since the 1930s
 3. conclusions about preventing another dust bowl
- Ⓓ
 1. descriptions of the towns and places in the novel
 2. descriptions of those places as they are today
 3. discussion of the similarities between them

Celia, a student in the class, wrote an essay about the personal and environmental effects of the dust bowl. Here is her introductory paragraph. Use it to answer Numbers 25 through 27.

¹Poor land management techniques, lack of rainfall, and high temperatures all contributed to the dust bowl during the 1930s. ²Crops failed, banks closed, and many people lost their jobs. ³The effects rippled across the country like billowing dust storms. ⁴Millions of people migrated from the Great Plains to the West in search of work. ⁵They established camps filled with basic shelters. ⁶The newcomers competed with established residents for jobs, causing conflicts and additional hardships. ⁷People had to get really clever to cope with all the problems. ⁸Some solutions came in the form of government programs; others came from hard work.

25 Choose the best way to combine Sentences 4 and 5 in order to make the writing clear and effective.

- Ⓐ Millions of people migrating from the Great Plains to the West and establishing camps filled with basic shelters searched for work.
- Ⓑ Millions of people searching for work migrated from the Great Plains to the West where they established camps filled with basic shelters.
- Ⓒ Migrating from the Great Plains to the West to establish camps filled with basic shelters, millions of people had to search for work.
- Ⓓ Searching for work and basic shelters, millions of people migrated, and they established camps from the Great Plains to the West.

26 Choose the best way to revise Sentence 7 so that the tone is consistent with the rest of the paragraph.

- Ⓐ People needed to be very creative to cope with all the problems.
- Ⓑ Getting real clever was necessary to deal with all the problems.
- Ⓒ People needed to get real creative to cope with all the hassles.
- Ⓓ To cope with all the problems, folks really had to get clever.

27 In Sentence 5, what does the word *basic* imply about the shelters?

- Ⓐ They were large.
- Ⓑ They were comfortable.
- Ⓒ They were plain.
- Ⓓ They were old-fashioned.

Directions

For Numbers 28 and 29, read the sentence. Then choose the best way to rewrite the sentence, beginning with the words provided.

28 The loudly protesting crowd with signs held high blocked the boulevard for several hours.

The crowd . . .

- that blocked the boulevard for several hours with signs held high protested loudly.
- with signs held high for several hours blocked the boulevard and protested loudly.
- protested loudly and blocked the boulevard with signs held high for several hours.
- blocked the boulevard for several hours, protesting loudly with signs held high.

29 S. E. Hinton is a popular author with teenagers because she has a realistic understanding of adolescent characters, conflicts, and language.

Because of her realistic understanding of . . .

- adolescent characters, conflicts, and language, S. E. Hinton is a popular author with teenagers.
- teenagers and their characters, conflicts, and language, S. E. Hinton is a popular author with adolescents.
- adolescent characters, conflicts, as well as language, the author, S. E. Hinton, is popular with teenagers.
- both teenagers and adolescent characters, conflicts, and language, S. E. Hinton, is a popular author.

Directions

For Numbers 30 and 31, choose the best way to revise the sentence to make the writing style or tone appropriate for the new purpose or audience while keeping the meaning of the sentence the same.

30 The process by which one writes a successful paper in high school involves both careful planning and thorough research.

Revise to an informal, casual style.

- Ⓐ Before one begins to write a successful paper in high school, one must do careful planning and thorough research.
- Ⓑ You need to realize that writing a successful paper in high school takes both careful planning and thorough research.
- Ⓒ Careful planning and thorough research is the process by which successful high school papers are written.
- Ⓓ According to students, the process of writing a successful paper in high school involves careful planning and thorough research.

31 The students visited library after library and spent hour after hour just getting information to finish their science projects.

Revise for an unfamiliar, adult audience.

- Ⓐ You should have seen how many libraries the students went to and how many hours they spent getting the information they needed to complete their science projects.
- Ⓑ The students went from library to library and spent a bunch of hours collecting information to finish their science projects.
- Ⓒ When doing a science project, be sure to schedule sufficient time to visit several libraries and time to spend many hours gathering information.
- Ⓓ The students visited several libraries and spent countless hours gathering information in order to complete their science projects.

Directions

For Numbers 32 through 34, choose the best way to revise the underlined part to create a clear and complete sentence. If no changes are needed, choose the response "Best as it is."

32 Because futuristic plots appeal to her, Arielle enjoys science fiction.

- Ⓐ Arielle, because futuristic plots appeal to her, enjoys science fiction.
- Ⓑ Enjoying science fiction, futuristic plots appeal to Arielle.
- Ⓒ Arielle enjoys science fiction when futuristic plots appeal to her.
- Ⓓ Best as it is

33 People may disapprove of some movies, but that does not mean they are bad.

- Ⓐ the people are
- Ⓑ their disapproval is
- Ⓒ the movies are
- Ⓓ Best as it is

34 The jagged coastline of the Chesapeake Bay with numerous inlets and waterways.

- Ⓐ The jagged coastline of the Chesapeake Bay has numerous inlets and waterways.
- Ⓑ The jagged coastline of the Chesapeake Bay creating numerous inlets and waterways.
- Ⓒ The jagged coastline of the Chesapeake Bay, with its numerous inlets and waterways.
- Ⓓ Best as it is

Directions

Read the paragraph below. Then answer Numbers 35 and 36.

¹Many adults resist technological advances and even fear them! ²My grandfather, for example, is baffled by computers. ³Never having used one before. ⁴He does use the microwave. ⁵Programming the VCR is too challenging, however. ⁶Wow! ⁷I wonder if future technologies will confuse me when I'm much older!

35 Which of these is not a complete sentence?

- Ⓐ Sentence 1
- Ⓑ Sentence 3
- Ⓒ Sentence 4
- Ⓓ Sentence 7

36 Which of these is the best way to combine the ideas in Sentence 4 and Sentence 5?

- Ⓐ Although he does use the microwave, programming the VCR is too challenging.
- Ⓑ While he does use the microwave, however, programming the VCR is too challenging.
- Ⓒ He does use the microwave, and programming the VCR, however, is too challenging.
- Ⓓ Despite the fact that he does use the microwave, programming the VCR is too challenging, however.



Maryland

High School Assessment Program



Geometry

Prototype Items

1998-1999

Directions

The questions in this booklet are samples of the kinds of questions that might appear on future Geometry tests for the Maryland High School Assessment. There are three types of test questions: multiple-choice, student-produced response, and open-ended. You will be provided with separate directions for the student-produced response questions. Some of the open-ended questions require short written answers. Other questions require longer written answers.



When you see this symbol next to a question, you should expect to take about 5 minutes to answer.



When you see this symbol next to a question, you should expect to take about 10 minutes to answer.

You should do your best to answer each question completely and correctly. You may need to use more or less time than is expected to answer each question. You should write your answer within the available space. You may not need to use all of the lines that are provided for writing your answer.

The answer choices for the multiple-choice questions are labeled ABCD or FGHI. If your teacher has directed you to write your answers in the test booklet, then completely fill in the bubble to indicate your answer choice. If you are using a separate piece of paper to write your answers, be sure to write the letter that is next to the answer choice you choose.

Student-Produced Response Questions

Several questions in this test require you to enter your answer on a special grid like the one shown below.

/	/	/	/	/
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Directions for Completing the Response Grids

1. Find the answer to the problem.
2. Write your answer in the boxes at the top of the grid.
 - Print your answer with the first digit (or symbol) in the left answer box, or with the last digit in the right answer box.
 - Print no more than one digit or symbol in each answer box. Do not leave a blank answer box in the middle of an answer.
 - Be sure to write a decimal point or fraction bar in the answer box if it is part of the answer.
3. Fill in the appropriate bubble under each box in which you wrote your answer.
 - Fill in only one bubble for each answer box used in your answer. Do not fill in a bubble under an unused answer box.
 - You must fill in the bubbles accurately to receive credit for your answer.

Examples of Valid Responses

The answer grids below show valid ways to enter an answer of $\frac{3}{2}$.

		3	/	2	
		/	/	•	
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	•	2
3	3	•	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

3	/	2			
•	/	/			
0	0	0	0	0	0
1	1	1	1	1	1
2	2	•	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

1	.	5			
/	/	/			
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	•	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

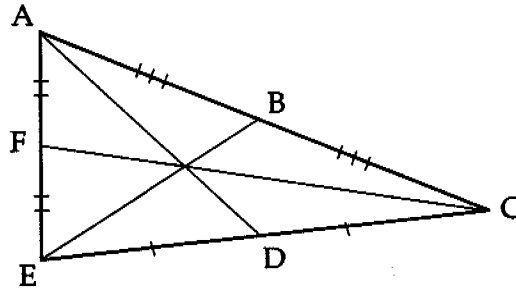
		1	.	5	
/	/	/			
0	0	0	0	0	0
1	1	•	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	•	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Special Directions for Mixed Numbers, Decimals, and Negative Numbers

- Mixed numbers must be entered as decimals or improper fractions. For example, an answer of $1\frac{1}{2}$ should be entered as 1.5 or $\frac{3}{2}$.
- Decimal answers should be entered as accurately as possible unless otherwise indicated in the problem.
- No Student-Produced Response questions have negative answers.

Geometry

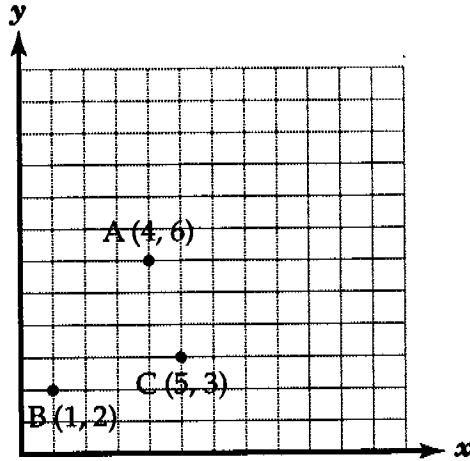
Triangle ACE is shown below.



Which term describes \overline{BE} , \overline{DA} , and \overline{FC} ?

- Ⓐ medians
- Ⓑ altitudes
- Ⓒ angle bisectors
- Ⓓ perpendicular bisectors

Three vertices of parallelogram ABCD are shown on the grid below.

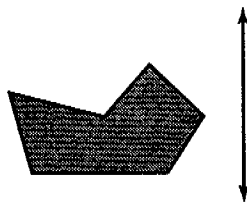


Which of these could be the coordinates of point D?

- Ⓐ (7, 8)
- Ⓑ (7, 9)
- Ⓒ (8, 7)
- Ⓓ (9, 7)

3

Study the polygon and vertical line shown below.



A student will reflect the polygon across the line. Then the student will rotate the reflected polygon 90° clockwise. Which figure shows the result of these two transformations?



A



B



C



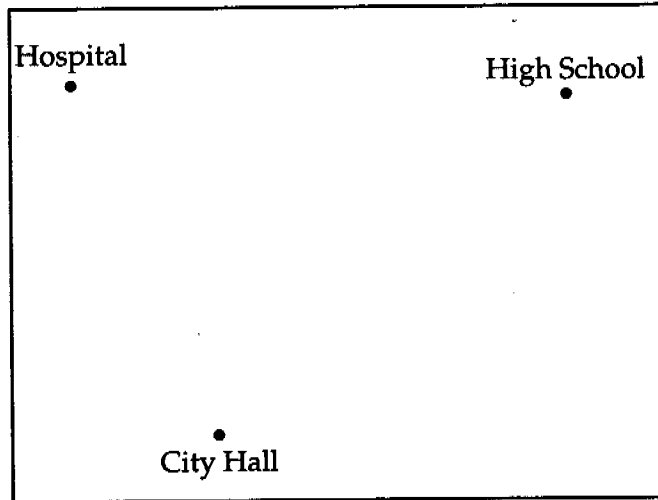
D



A diagram of Rockville is shown below. The people of Rockville want a new bus station built equidistant from the hospital, the city hall, and the high school.



DIAGRAM OF ROCKVILLE

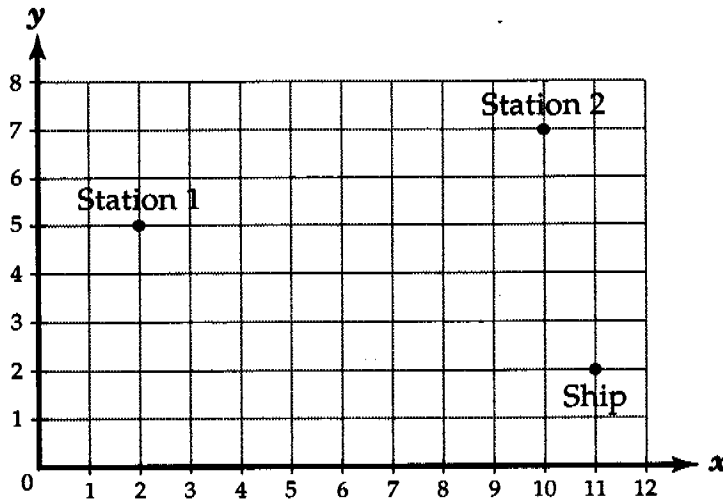


- Use a construction to locate the new bus station on the diagram above.
- Explain the steps in your construction.
- Justify your answer.



Directions

A ship is traveling toward an underwater wreck located at the midpoint between Station 1 and Station 2. The locations of the ship and the stations are shown on the grid below. Use the grid to do Numbers 5 and 6.



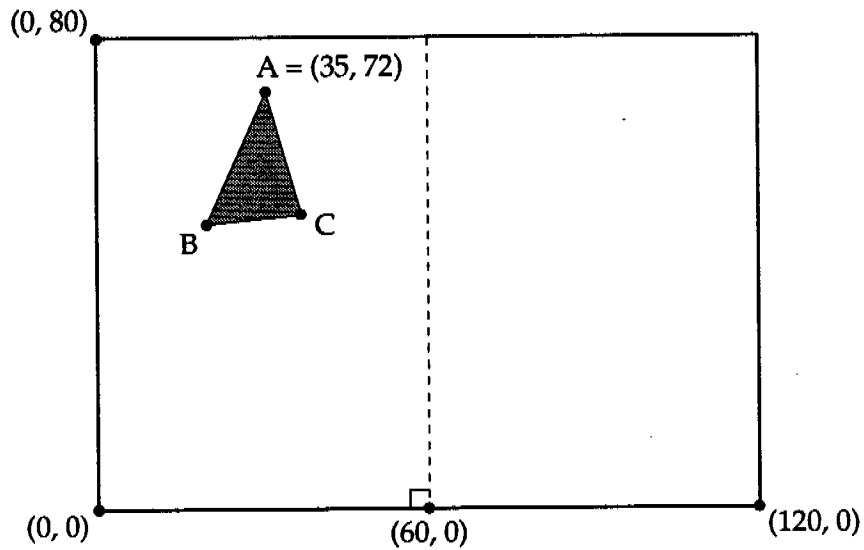
5. What is the location of the wreck?

- (A) (6, 7)
- (B) (6, 6)
- (C) (7, 6)
- (D) (5, 6)

6. What is the distance from the ship to Station 2?

- (F) $\sqrt{26} \approx 5.10$ units
- (G) 6 units
- (H) $\sqrt{97} \approx 9.85$ units
- (J) 12 units

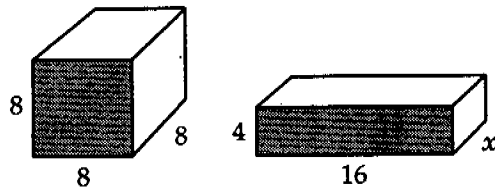
An artist will reflect triangle ABC across the dotted line on the computer screen shown below.



What will be the coordinates of the image of vertex A?

- Ⓐ (25, 72)
- Ⓑ (35, 72)
- Ⓒ (85, 72)
- Ⓓ (95, 72)

Both rectangular solids shown below have the same volume.



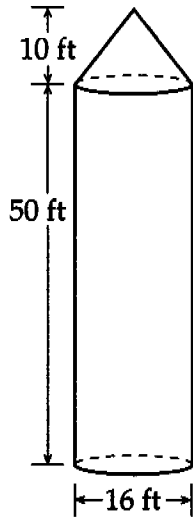
Note: The figures are not drawn to scale.

What is the value of x ?

- Ⓐ 4
- Ⓑ 8
- Ⓒ 12
- Ⓓ 16



A farmer uses the silo shown below to store wheat. The silo consists of a cylinder and a cone.

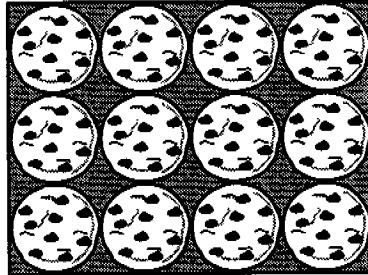


What is the volume of the silo? Round the answer to the nearest hundred cubic feet.

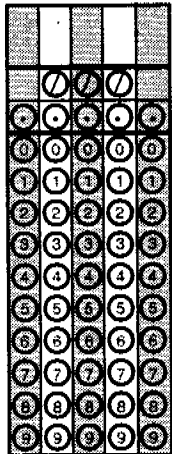
- Ⓐ 10,700
- Ⓑ 11,100
- Ⓒ 12,100
- Ⓓ 12,700



The baking sheet shown below holds 12 cookies. Each cookie has a diameter of 3 inches.



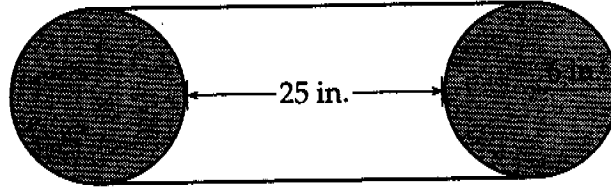
What is the area of the unused part of the baking sheet? Round the answer to the nearest square inch.





A mechanic needs to replace the belt around the wheels shown below. The radius of each wheel is 6 inches.

5



Note: The figure is not drawn to scale.

- What is the length of the belt?
- Explain how you determined the length of the belt. Use words, symbols, or both in your explanation.



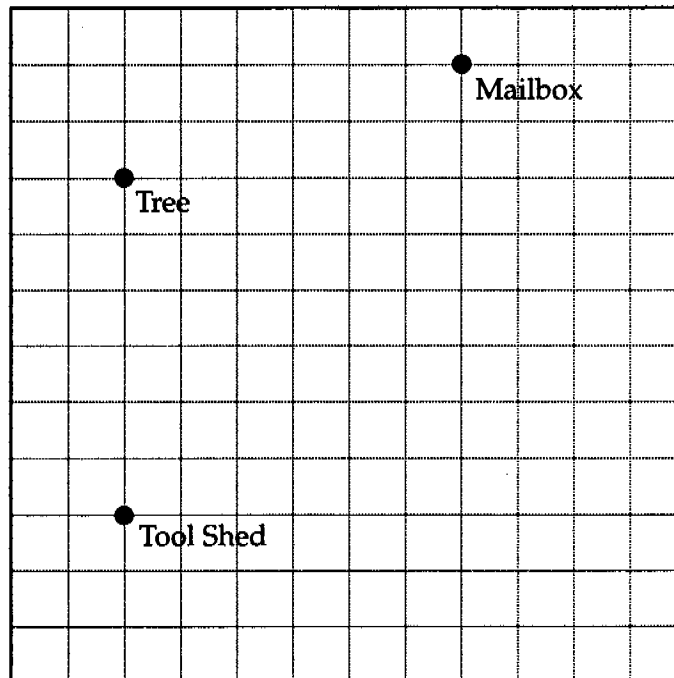


Stephen buried a time capsule in his yard. The distance from the capsule to the mailbox is the same as the distance from the capsule to the tool shed. The capsule is 6 feet away from the tree.



- Construct the location of the time capsule on the grid below.
- Explain the steps in your construction.

STEPHEN'S YARD

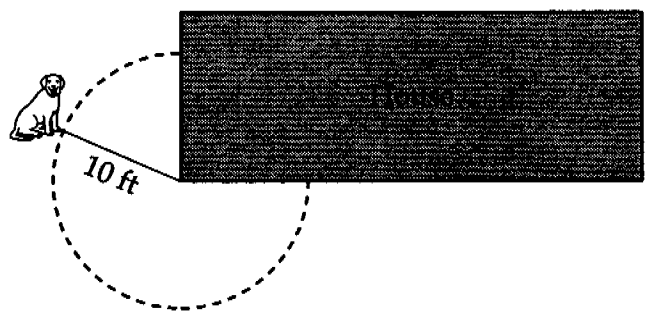


Scale: $\text{---} = 1 \text{ foot}$



13

A dog is tied to the corner of a rectangular house. The dog's leash is 10 feet long.

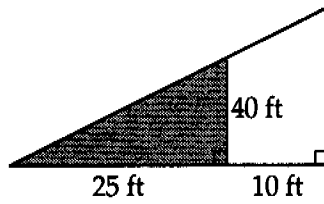


What is the area of the dog's play space? Round the answer to the nearest square foot.

- Ⓐ 47
- Ⓑ 79
- Ⓒ 236
- Ⓓ 314

14

Kris and Devon decided to mow the lawn shown below. Each agreed to mow half the lawn.



Note: The figure is not drawn to scale.

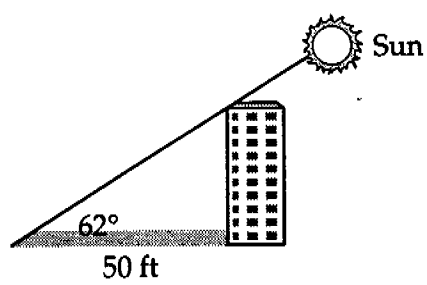
After mowing the unshaded region, Kris said he had mowed half the lawn. Devon disagreed.

- Who was correct?
- Justify your answer.



15

The shadow of a building is 50 feet long when the sun makes a 62° angle of elevation with level ground.



Note: The figure is not drawn to scale.

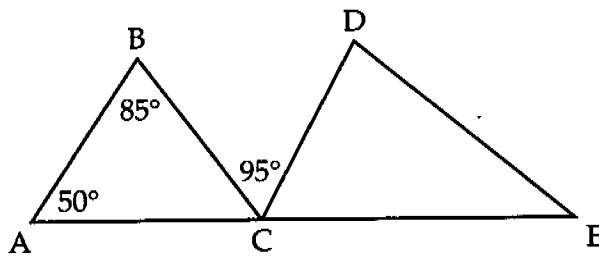
What is the height of the building? Round the answer to the nearest foot.

- (A) 23
- (B) 44
- (C) 74
- (D) 94





In the figure below, points A, C, and E are collinear.



Note: The figure is not drawn to scale.

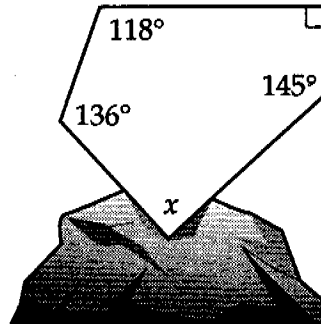
What is the measure of $\angle DCE$?

- Ⓐ 40°
- Ⓑ 45°
- Ⓒ 50°
- Ⓓ 60°



17

An archaeologist discovered an ancient cutting tool. The tool is in the shape of a pentagon. She hopes to learn its use by measuring the sharpness of the cutting blade, but the blade is lodged in rock.



Note: The figure is not drawn to scale.

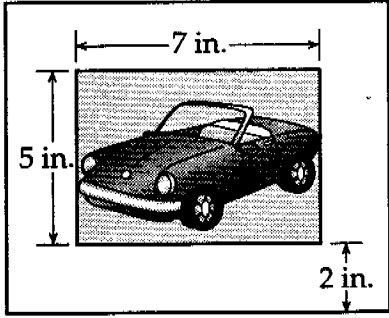
What is the measure, in degrees, of angle x ?

	/	/	/	
C
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

18

A 5-inch by 7-inch picture is placed into a rectangular frame. The frame is 2 inches wide.

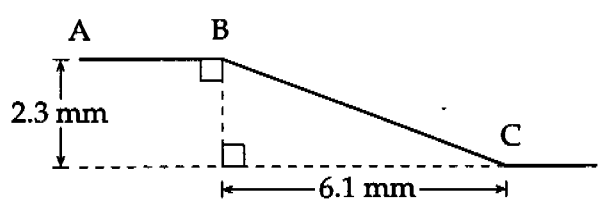
5



- Is the rectangular border of the picture similar to the outer border of the frame?
- Justify your answer.



19 A section of wire is connected from A to B to C.

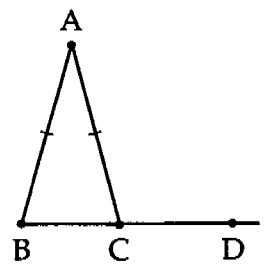


Note: The figure is not drawn to scale.

What is the measure of $\angle ABC$? Round the answer to the nearest degree.

- (A) 21°
- (B) 69°
- (C) 111°
- (D) 159°

20 Triangle ABC is isosceles with $m\angle A = 30^\circ$.



Note: The figure is not drawn to scale.

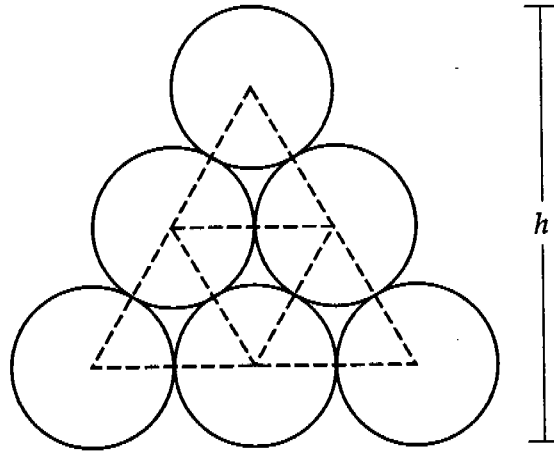
What is the measure of $\angle ACD$?

- (F) 75°
- (G) 105°
- (H) 120°
- (J) 150°



23

A person is stacking six cylindrical pipes as shown below. Each pipe is 30 inches in diameter.

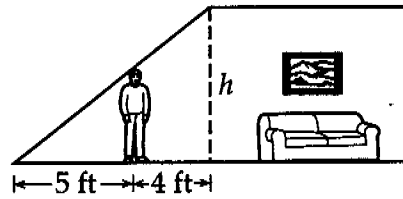


- What is the height (h) of the stack of pipes?
- Explain how you determined the height of the stack. Use words, symbols, and/or diagrams in your explanation.
- Justify your answer.





John wanted to measure the height (h) of the room shown below. John is 6 feet tall.



Note: The figure is not drawn to scale.

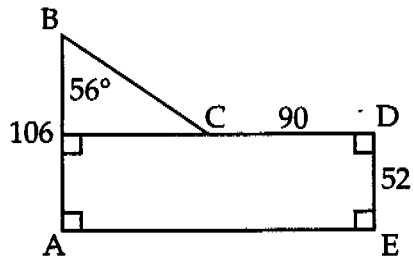
What is the height (h) of the room? Round the answer to the nearest foot.

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



25

Study the figure below.



Note: The figure is not drawn to scale.

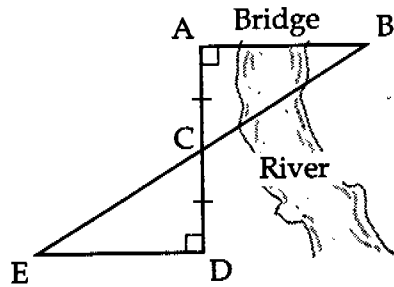
What is the length of \overline{AE} ? Round the answer to the nearest whole number.

- (A) 134
- (B) 170
- (C) 180
- (D) 212





A company plans to construct a bridge across a river. The bridge is shown as \overline{AB} in the diagram below.

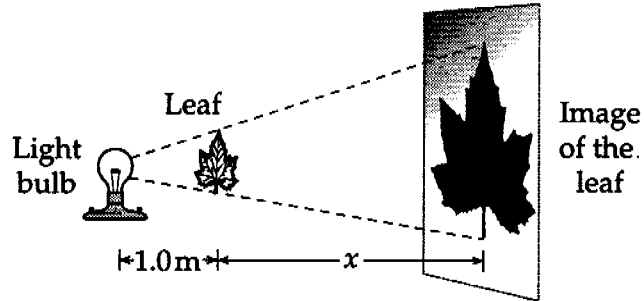


- Prove that $\triangle ABC \cong \triangle DEC$.
- Explain how the company can find the length of the bridge without measuring \overline{AB} .



27

A light bulb is used to project an image of a leaf onto a screen as shown below. The leaf is 0.15 meters in height, and the leaf is 1 meter from the bulb.



Note: The figure is not drawn to scale.

How far must the screen be from the leaf so that the image of the leaf is 1.75 meters in height? Round the answer to the nearest hundredth of a meter.

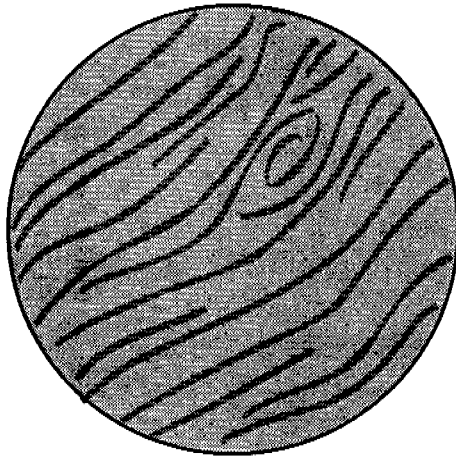
/	/	/	
.	.	.	.
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

28

A carpenter's square is a tool used to draw right angles. Joey has a carpenter's square and a round wooden picnic table. He wants to cut a hole for an umbrella in the exact center of the table.

10

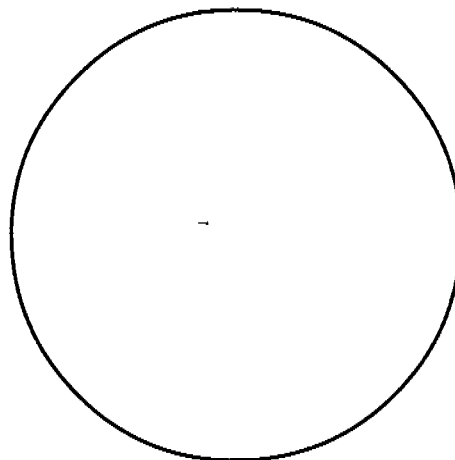
Table Top



Carpenter's Square



- How can Joey locate the center of the table top using the carpenter's square? Use words and/or a drawing to explain your answer. You may use the circle below to represent the table top.
- Justify your answer.

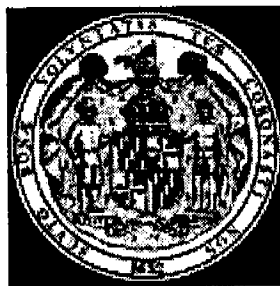






Maryland

High School Assessment Program



Government

Prototype Items

1998-1999

Directions

The questions in this booklet are samples of the kinds of questions that might appear on future Government tests for the Maryland High School Assessment. There are two types of test questions: multiple-choice and open-ended. Some of the open-ended questions require short written answers. Other questions require longer written answers.



When you see this symbol next to a question, you should expect to take about 5 minutes to answer.



When you see this symbol next to a question, you should expect to take about 30 minutes to answer.

You should do your best to answer each question completely and correctly. You may need to use more or less time than is expected to answer each question. You should write your answer within the available space. You may not need to use all of the lines that are provided for writing your answer.

The answer choices for the multiple-choice questions are labeled ABCD or FGHJ. If your teacher has directed you to write your answers in the test booklet, then completely fill in the bubble to indicate your answer choice. If you are using a separate piece of paper to write your answers, be sure to write the letter that is next to the answer choice you choose.

Government

1 Read Article II from the Articles of Confederation presented below.

Each state retains its sovereignty, freedom and independence, and every Power, jurisdiction and right, which is not by this confederation expressly delegated to the United States, in Congress assembled.
(1781)

The United States Constitution and Article II above are similar because they both give states powers

- Ⓐ not specifically granted or limited to Congress
- Ⓑ that are exercised only within state borders
- Ⓒ that are needed to maintain independence
- Ⓓ not used or wanted by the national government

2 Read this quotation written by James Madison about the Constitution.

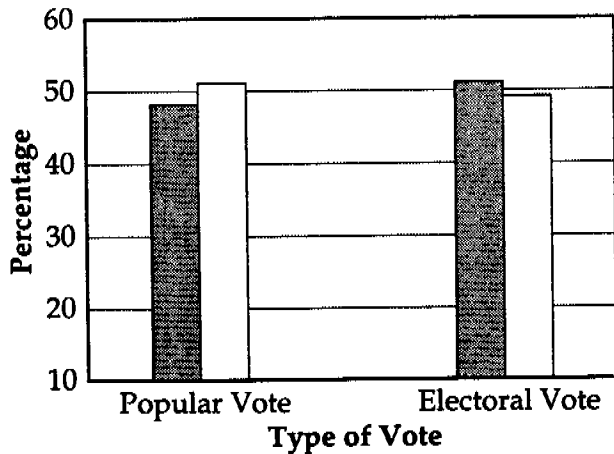
I believe that the great mass of the people who opposed it, disliked it because it did not contain effectual [adequate] provisions against encroachments on [violations of] particular rights, and those safeguards which they have been long accustomed to . . . nor ought we to consider them safe, while a great number of our fellow citizens think these securities necessary.
(1789)

James Madison was arguing for the addition of the Bill of Rights to

- Ⓐ demonstrate Congress's ability to modify the Constitution
- Ⓑ provide legal protection for individual rights and freedoms
- Ⓒ transfer power from the federal government to state governments
- Ⓓ guarantee the ratification of the Constitution by all thirteen colonies

3 Look at the graph below.

PRESIDENTIAL ELECTION RESULTS



- Candidate A
- Candidate B

Who will become president?

- Ⓐ the candidate with the majority of the popular vote
- Ⓑ the candidate with the majority of the electoral vote
- Ⓒ the candidate who is selected by the U.S. House of Representatives
- Ⓓ the candidate who wins a run-off election

4 Read the headlines below.

PRESIDENT DIRECTS TROOPS TO DELIVER MAIL DURING POSTAL STRIKE

PRESIDENT HALTS IMPORTS OF CONTAMINATED VEGETABLES

PRESIDENT SENDS NATIONAL GUARD TO PREVENT LOOTING AFTER HURRICANE

What is the intent of the president's actions described in all of these headlines?

- Ⓐ to prevent labor strikes
- Ⓑ to prevent an economic recession
- Ⓒ to maintain public order and safety
- Ⓓ to provide for the national defense

5

A school club has decided to elect officers once a year. Which of these phrases from the Declaration of Independence best reflects this basic principle of government?

- Ⓐ "all men are created equal"
- Ⓑ "they are endowed by their Creator with certain inalienable rights"
- Ⓒ "among these [rights] are Life, Liberty, and the pursuit of Happiness"
- Ⓓ "deriving their just powers from the consent of the governed"

Directions

Look at the chart below. Then answer Numbers 6 and 7.

STATE ELECTORAL VOTES					
	1940	1996		1940	1996
Alabama	11	9	Montana	4	3
Alaska	—	3	Nebraska	7	5
Arizona	4	8	Nevada	3	4
Arkansas	9	6	New Hampshire	4	4
California	22	54	New Jersey	16	15
Colorado	6	8	New Mexico	3	5
Connecticut	8	8	New York	47	33
Delaware	3	3	North Carolina	13	14
District of Columbia	—	3	North Dakota	4	3
Florida	7	25	Ohio	26	21
Georgia	12	13	Oklahoma	11	8
Hawaii	—	4	Oregon	5	7
Idaho	4	4	Pennsylvania	36	23
Illinois	29	22	Rhode Island	4	4
Indiana	14	12	South Carolina	8	8
Iowa	11	7	South Dakota	4	3
Kansas	9	6	Tennessee	11	11
Kentucky	11	8	Texas	23	32
Louisiana	10	9	Utah	4	5
Maine	5	4	Vermont	3	3
Maryland	8	10	Virginia	11	13
Massachusetts	17	12	Washington	8	11
Michigan	19	18	West Virginia	8	5
Minnesota	11	10	Wisconsin	12	11
Mississippi	9	7	Wyoming	3	3
Missouri	15	11			



6 The manager of a presidential campaign in 1940 would have focused on campaigning in Illinois, Pennsylvania, and New York. In 1996, a campaign manager would most likely have added California, Texas, and

- Ⓐ Colorado
- Ⓑ Florida
- Ⓒ Maine
- Ⓓ Maryland

7 Which of these best explains why the number of electoral votes a state has would change between 1940 and 1996?

- Ⓐ party politics
- Ⓑ gerrymandering
- Ⓒ voter registration
- Ⓓ population changes

8 Which of these best describes the role of third parties?

- Ⓐ They discourage supporters from voting for a particular candidate if their candidate withdraws from the race.
- Ⓑ They represent the views of a small portion of voters and lobby legislators on behalf of those voters.
- Ⓒ They allow former presidents to run for office for a third term.
- Ⓓ They support candidates whose positions on issues differ from the positions of the two main parties.

10 How would the number of members in each house of the United States Congress be affected if a 51st state were admitted to the Union?

- Ⓐ The number of Senators and Representatives would stay the same.
- Ⓑ The number of Senators and Representatives would increase.
- Ⓒ The number of Senators would increase; the number of Representatives would stay the same.
- Ⓓ The number of Senators would stay the same; the number of Representatives would increase.

11 What is the best way for a group of citizens to make sure that a bill is passed requiring skateboard riders to wear helmets?

- Ⓐ Lobby a legislator to introduce the bill and help to rally support for its passage.
- Ⓑ Propose the helmet law as a new plank in each party's platform.
- Ⓒ Contact the local commission in charge of parks and recreation and express concern.
- Ⓓ Drive interested voters to the polls on election day.

12 Airplanes had not been invented when the Constitution was written in 1787. In 1947 Congress created an air force to build up the common defense. Which phrase in the Constitution permitted Congress to do this?

- Ⓐ "take Care that the Laws be faithfully executed"
- Ⓑ "promote the progress of science and useful arts"
- Ⓒ "provide for calling forth the Militia to execute the Laws of the Union"
- Ⓓ "make all laws which shall be necessary and proper for carrying into execution the foregoing powers"

- 14** The cartoon below refers to conditions after which Supreme Court case?



- Ⓐ *McCullough v. Maryland*
- Ⓑ *Gideon v. Wainwright*
- Ⓒ *Brown v. Board of Education of Topeka*
- Ⓓ *Tinker v. Des Moines*

- 15** The decision in *New Jersey v. T.L.O.* requires schools to do all of these except

- Ⓐ establish reasonable rules of behavior to ensure that learning can occur
- Ⓑ have solid information that a school rule has been violated
- Ⓒ have reasonable suspicions that an individual has broken a school rule so that a search may be conducted
- Ⓓ have a search warrant in hand to investigate a student's possessions or person

- 16** Which situation would most likely lead to a criminal trial?

- Ⓐ A tenant is one week late, for the third time, in payment of rent.
- Ⓑ A married couple seeks a no-fault divorce.
- Ⓒ A person is caught after removing an expensive watch from a store without paying for it.
- Ⓓ A newspaper delivery person accidentally breaks a window.

- 17** Which of these cases should a judge not allow to go to trial?

- Ⓐ A company had a complaint against another company that was settled in arbitration.
- Ⓑ A person's house was damaged by a neighbor's tree that fell.
- Ⓒ A state government wants to file a civil suit against an industry accused of dumping sewage.
- Ⓓ A government has evidence to press criminal charges against an accused thief.

Directions

Read the quotations from *Plessy v. Ferguson* and *Brown v. Board*. Then answer Numbers 18 and 19.

"The object of the [Fourteenth] Amendment was undoubtedly to enforce the absolute equality of the two races before the law, but, in the nature of things, it could not have been intended to abolish distinctions based upon color, or to enforce social, as distinguished from political, equality, or a commingling [mixing] of the two races upon terms unsatisfactory to either."

Plessy v. Ferguson, 163 U.S. 537 (1896)

"To separate [children in grade and high schools] from others of similar age and qualifications solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone. . . . We conclude that in the files of public education the doctrine of 'separate but equal' has no place."

Brown v. Board, 347 U.S. 483 (1954)

18

The differences in the decisions in *Plessy* and *Brown* demonstrate

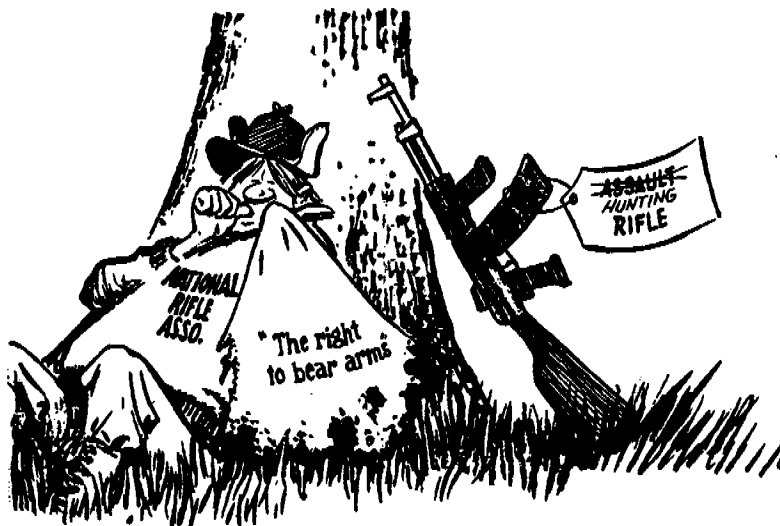
- Ⓐ speedy trials
- Ⓑ precedent
- Ⓒ rigid interpretation of the Constitution
- Ⓓ flexible interpretation of the Constitution

20

The Second Amendment to the United States Constitution states:

"A well regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed."

1. Identify the phrases from the Second Amendment above and other arguments that might be used to protest gun control.
2. Identify the phrases from the Second Amendment above and other arguments that might be used to support gun control.
3. Which side of the issue would the author of the cartoon below support? Use specific examples from the cartoon to support your answer.



PAINE
EUGENE PAYNE
Courtesy Charlotte Observer

THE SECURITY BLANKET



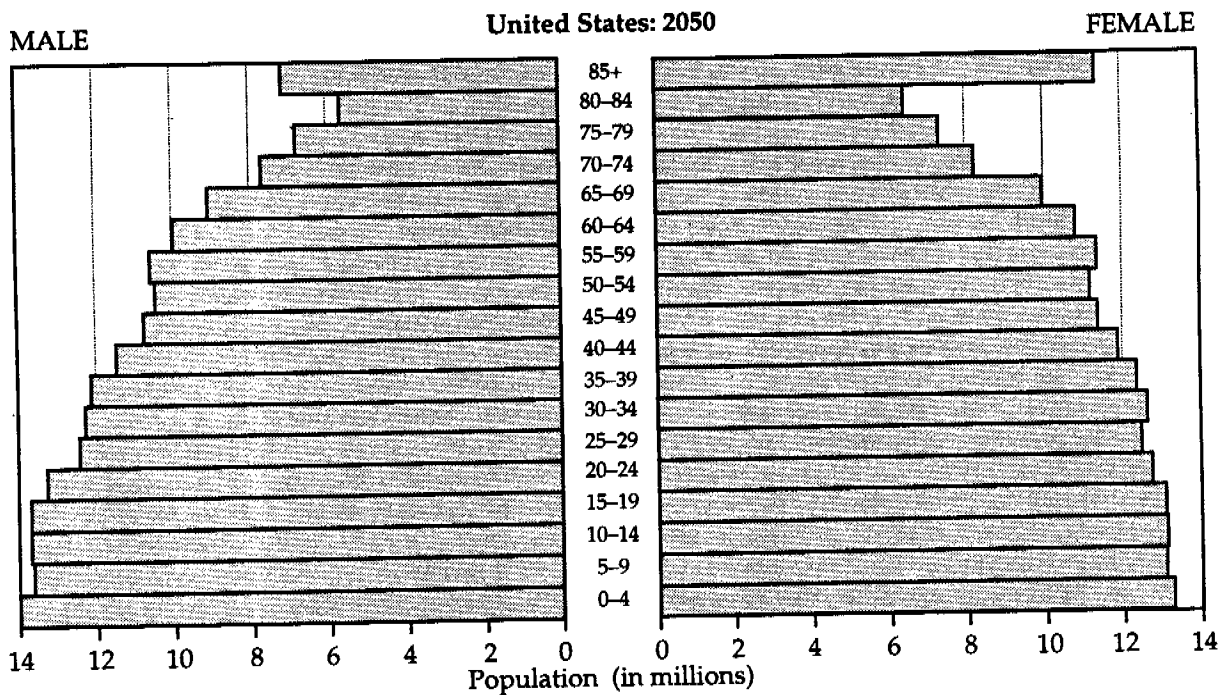
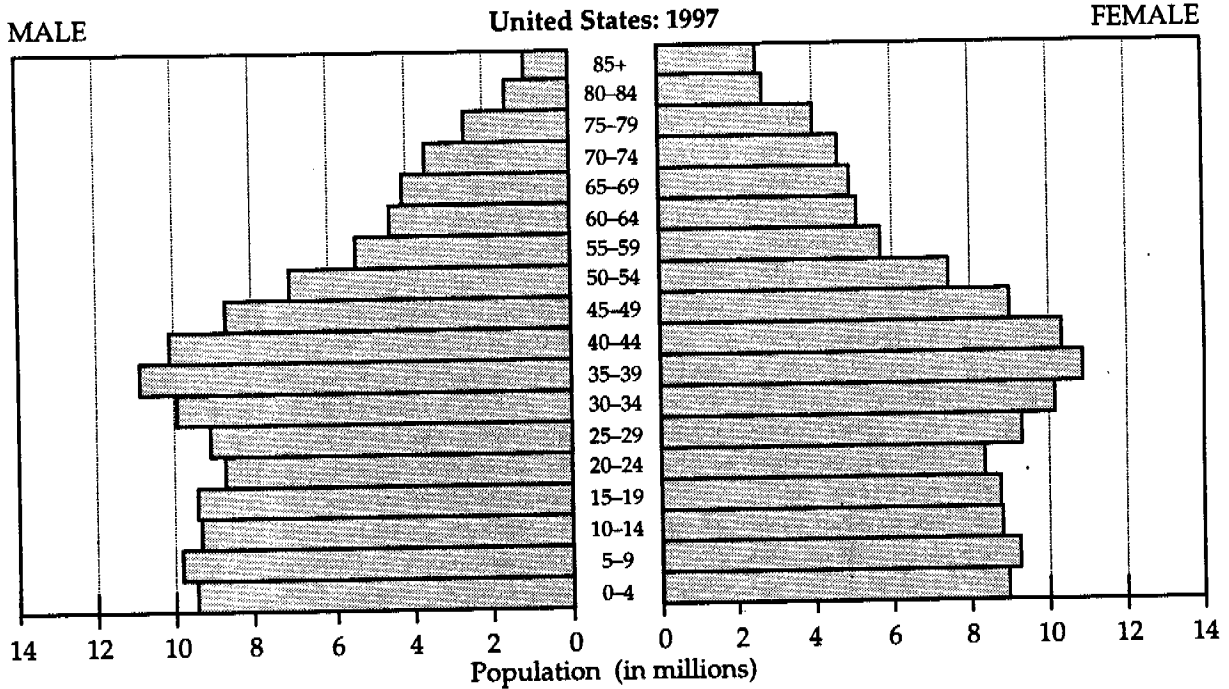




Directions

Use the graphs below to answer Number 21.

POPULATION PYRAMID SUMMARY FOR UNITED STATES



Census Bureau: *International Database*



24 Which of these would be a responsibility of the Federal Trade Commission?

- recalling child safety seats found to be defective
- enforcing child labor laws, both inside and outside the United States
- preventing one utility company from monopolizing all services
- setting standards for the purity of imported meat and meat products

25 What was a direct result of the North American Free Trade Agreement (NAFTA) of 1993?

- The World Bank established trade limits throughout North America.
- More Canadian businesses relocated to the United States.
- Importing goods into the United States decreased.
- Trade between Mexico and the United States increased.

26 To control the rate of inflation, the Federal Reserve could

- increase taxes
- lower interest rates
- reduce the money supply
- increase government spending

27 Which type of interest group would have the greatest political and economic power to overturn an Environmental Protection Agency enforcement of the Clean Water Act?

- regional alliances that depend on clean river basins for their economic success
- businesses and industries whose production costs often increase as a result of the Clean Water Act
- farmers whose crop subsidies may decrease as a result of enforcing the Clean Water Act
- environmental groups that worked for the passage of the original Clean Water Act in 1970

28 The states of New York and New Jersey joined efforts to form The Port Authority, which handles shipments in and out of their port cities. This is an example of government policy being shaped by

- community interests
- regional interests
- national interests
- international interests

29 Why might making decisions take longer in a democratic government than in an authoritarian government?

- Democratic representatives need time to listen to what citizens have to say.
- Authoritarian leaders take time to investigate all options and their consequences.
- Issues must be discussed by all three branches of government in a democratic government.
- Issues must be discussed and resolved by all members of the Cabinet in an authoritarian government.

30 Several regions that were formerly part of the Soviet Union have formed new nations. Which concept does this illustrate?

- federalism
- human rights
- national security
- self-determination

31 Which of these statements describes how the North Atlantic Treaty Organization (NATO) and the United Nations are similar?

- They balance international trading of imports and exports.
- They coordinate international military actions.
- They equalize the exchange values of world currencies.
- They provide humanitarian aid for disaster victims.

32

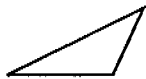








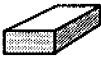
Explain one goal of the United Nations and the methods it may use to achieve that goal.

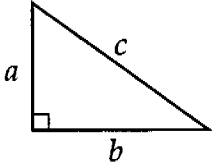
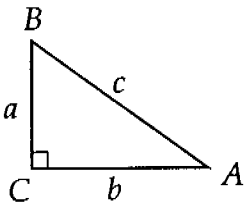


A series of horizontal lines for writing the answer to question 32.



Maryland HSA Mathematics Reference Sheet

Figure	Area	
Triangle 	$A = \frac{1}{2}bh$	where b = base and h = height
Rectangle 	$A = lw$	where l = length and w = width
Trapezoid 	$A = \frac{1}{2}h(b_1 + b_2)$	where b = base and h = height
Parallelogram 	$A = bh$	where b = base and h = height
Circle 	$A = \pi r^2$	where r = radius $C = \text{circumference} = \pi d = 2\pi r$, where r = radius and d = diameter
Figure	Volume	Total Surface Area
Right Circular Cone 	$V = \frac{1}{3}\pi r^2 h$ where r = radius and h = height	$SA = \frac{1}{2}(2\pi r)\ell + \pi r^2 = \pi r\ell + \pi r^2$ where r = radius and ℓ = slant height
Square Pyramid 	$V = \frac{1}{3}lwh$ where l = length, w = width, and h = height	$SA = 4\left(\frac{1}{2}l\ell\right) + l^2 = 2l\ell + l^2$ where l = length and ℓ = slant height
Sphere 	$V = \frac{4}{3}\pi r^3$ where r = radius	$SA = 4\pi r^2$ where r = radius
Right Circular Cylinder 	$V = \pi r^2 h$ where r = radius and h = height	$SA = 2\pi r h + 2\pi r^2$ where r = radius and h = height
Rectangular Solid 	$V = lwh$ where l = length, w = width, and h = height	$SA = 2lw + 2hw + 2lh$ where l = length, w = width, and h = height

<p>Sum of the measures of the interior angles of a polygon:</p> $180(n - 2)$ <p>where n = the number of sides</p>	<p>Measure of an interior angle of a regular polygon:</p> $\frac{180(n - 2)}{n}$ <p>where n = the number of sides</p>
	<p>Pythagorean Theorem:</p> $c^2 = a^2 + b^2$
<p>Standard Form: $Ax + By = C$ where A and B are not both zero.</p>	
<p>Slope-Intercept Form:</p> $y = mx + b$ <p>where m = slope and b = the y-intercept</p>	<p>Slope (s): $P_1(x_1, y_1) P_2(x_2, y_2)$</p> $s = \frac{y_2 - y_1}{x_2 - x_1}$
<p>Midpoint between two points:</p> $P_1(x_1, y_1) P_2(x_2, y_2)$ $midpoint = \left(\frac{x_2 + x_1}{2}, \frac{y_2 + y_1}{2} \right)$	<p>Distance between two points:</p> $P_1(x_1, y_1) P_2(x_2, y_2)$ $distance = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
<p>Distance Formula:</p> $d = rt$ <p>where d = distance, r = rate, and t = time</p>	<p>Simple Interest (I):</p> $I = prt$ <p>where p = principle, r = interest rate, and t = time</p>
<p>Trigonometric Ratios:</p> 	<p>Sine $A = \sin A = \frac{a}{c} = \left(\frac{\text{opposite}}{\text{hypotenuse}} \right)$</p> <p>Cosine $A = \cos A = \frac{b}{c} = \left(\frac{\text{adjacent}}{\text{hypotenuse}} \right)$</p> <p>Tangent $A = \tan A = \frac{a}{b} = \left(\frac{\text{opposite}}{\text{adjacent}} \right)$</p>

Supplemental Directions for Mathematics Teachers

Please read this supplement prior to administering items from the Algebra or Geometry prototype booklets. It briefly describes the types of items in the prototypes, the rubric criteria to score the items, and the materials your students will need in order to complete the items.

Description of Item Types

There are four different types of Algebra and Geometry prototype items. These item types are described below.

- Selected Response (SR) — SR items are multiple-choice questions which require students to select the best response from among four answer choices. An SR item is expected to take approximately 1 minute to complete.
- Student-Produced Response (SPR) — SPR items require students to mark their answers in special bubble grids. An SPR item is expected to take approximately 2 minutes to complete.
- Brief Constructed Response (BCR) — BCR items require short written answers. These items may require students to show their work and/or explain their processes, explain their reasoning, complete a graph, perform a geometric construction, or develop a geometric proof. A BCR item is expected to take approximately 5 minutes to complete.
- Extended Constructed Response (ECR) — ECR items require longer written answers. ECR items may require students to show their work and/or explain their processes, explain their reasoning, complete a graph, perform a geometric construction, or develop a geometric proof. An ECR item is expected to take approximately 10 minutes to complete.

Constructed-Response Items and the Rubric Criteria

The BCR and ECR items will be scored with generic rubrics. The rubric criteria are analysis, representation, application, explanation, and justification. A BCR or ECR item will require the student to apply three to five of these criteria in their response. The criteria are described below.

- Analysis refers to understanding the problem and determining the strategies or processes needed to solve the problem.
- Representation refers to the appropriate display of information. The graphs have a title, axes have appropriate scale and labels, data is graphed correctly, equations have variables identified, charts and tables are labeled correctly, and constructions and drawings are accurate.

- Application refers to the appropriate concepts and strategies applied to solve the problem correctly. The appropriate units are used. The solution is written in a complete sentence and has been checked for reasonableness in the context of the problem.
- Explanation refers to using words, symbols, or both words and symbols to explain the processes used to solve the problem.
- Justification refers to using the definitions, postulates, and theorems to demonstrate the validity of the solution.

Recommended Testing Materials

There are Algebra and Geometry prototype items that require the use of tools or manipulatives. The following materials should be available to the students during administration.

- Graphing calculator — See below for recommended features.
- Ruler or straightedge — May be used in drawings, constructions, charts, or tables.
- Protractor (Geometry only) — May be used to measure or draw angles.
- Compass (Geometry only) — May be used in geometric constructions.
- Patty paper (Geometry only) — May be used in geometric constructions.

Graphing Calculator Features

There are Algebra and Geometry prototype items that require the use of a graphing calculator. Calculators used during testing should be able to:

- evaluate trigonometric functions
- graph functions
- generate function tables
- generate scatterplots
- identify roots and intersections on graphs
- identify maxima and minima on graphs
- compute statistical quantities such as mean, median, mode, standard deviation, and quartiles
- determine lines of best fit
- perform matrix computations

**1 COPY
FOR
EACH
TEACHER, by
Content Area**

**Contents: Answer keys for all content
areas**

Maryland High School Assessment Prototype Item Answer Key

Geometry

Item Number	Answer
1.	A
2.	H
3.	C
4.	Extended Constructed Response (The scoring rubric is being developed.)
5.	B
6.	F
7.	C
8.	G
9.	A
10.	23
11.	Brief Constructed Response (The scoring rubric is being developed.)
12.	Brief Constructed Response (The scoring rubric is being developed.)
13.	C
14.	Extended Constructed Response (The scoring rubric is being developed.)
15.	D
16.	F
17.	51
18.	Brief Constructed Response (The scoring rubric is being developed.)
19.	D
20.	G
21.	18.1
22.	H
23.	Extended Constructed Response (The scoring rubric is being developed.)
24.	11
25.	B
26.	Brief Constructed Response (The scoring rubric is being developed.)
27.	10.67
28.	Extended Constructed Response (The scoring rubric is being developed.)

Maryland High School Assessment Prototype Item Answer Key

English I

Item Number	Answer
1.	C
2.	F
3.	C
4.	G
5.	D
6.	Brief Constructed Response (The scoring rubric is being developed.)
7.	A
8.	J
9.	Extended Constructed Response (The scoring rubric is being developed.)
10.	H
11.	B
12.	H
13.	Brief Constructed Response (The scoring rubric is being developed.)
14.	H
15.	D
16.	G
17.	A
18.	G
19.	Brief Constructed Response (The scoring rubric is being developed.)
20.	F
21.	D
22.	H
23.	D
24.	F
25.	B
26.	F
27.	C
28.	J
29.	A
30.	G
31.	D
32.	J
33.	C
34.	F
35.	B
36.	F

Maryland High School Assessment Prototype Item Answer Key

Government

Item Number	Answer
1.	A
2.	G
3.	B
4.	H
5.	D
6.	G
7.	D
8.	J
9.	Brief Constructed Response (The scoring rubric is being developed.)
10.	H
11.	A
12.	J
13.	Brief Constructed Response (The scoring rubric is being developed.)
14.	H
15.	D
16.	H
17.	A
18.	J
19.	Brief Constructed Response (The scoring rubric is being developed.)
20.	Extended Constructed Response (The scoring rubric is being developed.)
21.	Brief Constructed Response (The scoring rubric is being developed.)
22.	Brief Constructed Response (The scoring rubric is being developed.)
23.	Brief Constructed Response (The scoring rubric is being developed.)
24.	H
25.	D
26.	H
27.	B
28.	G
29.	A
30.	J
31.	B
32.	Brief Constructed Response (The scoring rubric is being developed.)

Maryland High School Assessment Prototype Item Answer Key

Algebra

Item Number	Answer
1.	C
2.	J
3.	Extended Constructed Response (The scoring rubric is being developed.)
4.	F
5.	B
6.	G
7.	Extended Constructed Response (The scoring rubric is being developed.)
8.	H
9.	B
10.	H
11.	Brief Constructed Response (The scoring rubric is being developed.)
12.	5
13.	$\frac{1}{12}$
14.	$\frac{1}{20}$
15.	Brief Constructed Response (The scoring rubric is being developed.)
16.	F
17.	D
18.	Brief Constructed Response (The scoring rubric is being developed.)
19.	A
20.	F
21.	Brief Constructed Response (The scoring rubric is being developed.)
22.	H
23.	B
24.	H
25.	Extended Constructed Response (The scoring rubric is being developed.)
26.	Extended Constructed Response (The scoring rubric is being developed.)

**Maryland High School Assessment
Prototype Item Answer Key**

Biology

Item Number	Answer
1.	A
2.	J
3.	Extended Constructed Response (The scoring rubric is being developed.)
4.	G
5.	B
6.	F
7.	C
8.	G
9.	D
10.	J
11.	D
12.	F
13.	D
14.	Brief Constructed Response (The scoring rubric is being developed.)
15.	C
16.	J
17.	B
18.	F
19.	B
20.	F
21.	Brief Constructed Response (The scoring rubric is being developed.)
22.	H
23.	C
24.	F
25.	C
26.	F
27.	Brief Constructed Response (The scoring rubric is being developed.)