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ABSTRACT

Beginning in Spring 1998, Virginia students participated in the Standards of Learning (SOL) assessments designed to test student knowledge of the content and skills specified in the state's standards. This document contains questions that approximately 79,000 students in grade 8 were required to answer as part of the SOL assessments. These questions are representative of the SOL tests and are provided to demonstrate the format of the test questions. Sample items are presented from the English tests for reading and writing, the mathematics test, the history and social science test, the science test, and the computer/technology test. A page with correct test answers is included. (SLD)

Virginia

Standards of Learning Assessments

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GRADE 8

RELEASED ITEMS

1998

TM030292

Virginia Department of Education

Virginia

Standards of Learning Assessments

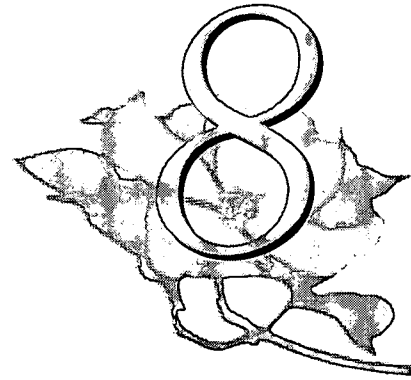
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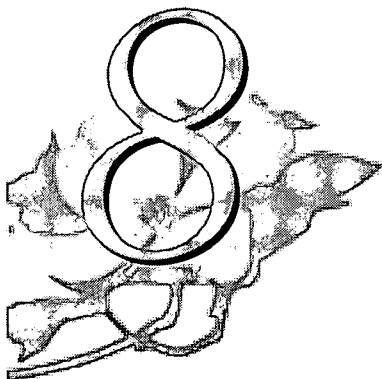
GRADE EIGHT

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GRADE EIGHT

Introducing the VIRGINIA STANDARDS OF LEARNING



Grade 8 Assessment

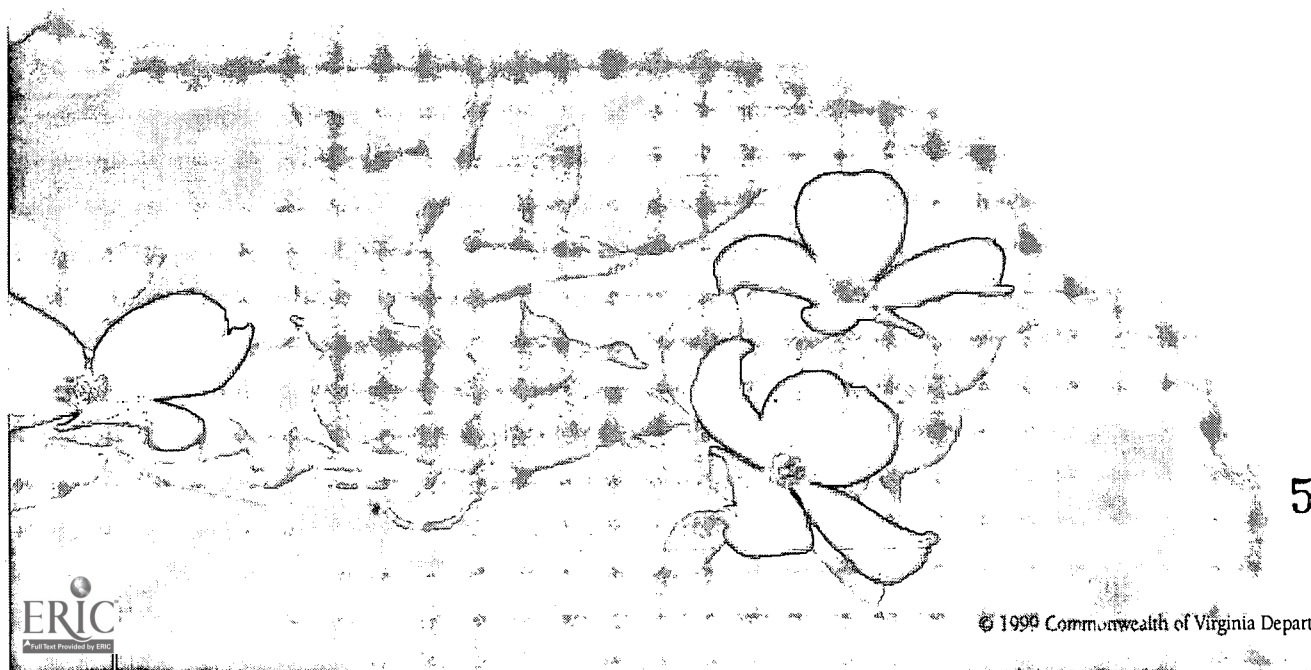
Our goal in Virginia is to raise student achievement through accountability for results so that *all* our schoolchildren, not just a lucky few, will be prepared to compete successfully in the global economy of the 21st century. With a desire to accomplish this goal, more than 5,000 qualified teachers, parents, business professionals, and others worked together to develop the nationally acclaimed Virginia Standards of Learning (SOL). Designed to provide Virginia students with a content-rich, rigorous academic foundation, these standards were adopted by the Board of Education in 1995.

Beginning in the Spring of 1998, students participated in the *Virginia Standards of Learning Assessments*. These assessments were designed to test student knowledge of the content information and skills specified in the Virginia Standards. Student proficiency in the academic areas of English, Mathematics, History and Social Science, Science, and Computer/Technology was and continues to be evaluated by these tests.

The SOL Assessments enable parents, teachers, and students to evaluate student knowledge and better prepare them for success.

Sample items for the grade 8 tests

On the following pages you will find questions that approximately 79,000 students in grade 8 were asked to answer as part of the Spring 1998 *Virginia Standards of Learning (SOL) Assessments*. These questions are representative of the content and skills included in the Virginia SOL tests and are provided to help you understand the format of the test questions.



GRADE EIGHT

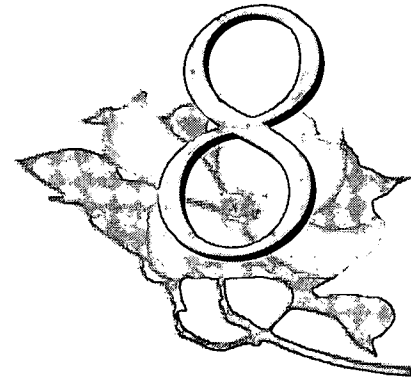
The Spring 1998 SOL tests marked the first statewide administration of these questions and others like them in the grade 8 content areas: English: Reading/Literature and Research, English: Writing, Mathematics, History and Social Science, Science, and Computer/Technology.

Each question on an SOL test was assigned to a Reporting Category. A Reporting Category addresses related content or skills in the Standards of Learning. For example, a Reporting Category for the grade 8 Mathematics test is Computation and Estimation. The standards in this Reporting Category include using whole numbers, fractions, decimals, and percents to solve practical problems such as tips, discounts, and sales taxes. Each test question in this booklet is identified with its Reporting Category. There are some Reporting Categories for which test questions have not yet been released.

A key for the correct answers to questions is on page 16 of this document.

All questions are multiple-choice, except for a writing prompt which asks students to write a composition. Every test question used on an SOL test is:

- reviewed and approved by a committee of Virginia teachers
- field tested (or tried out) with Virginia students
- reviewed again by Virginia teachers
- reviewed once again after the tests are put together.



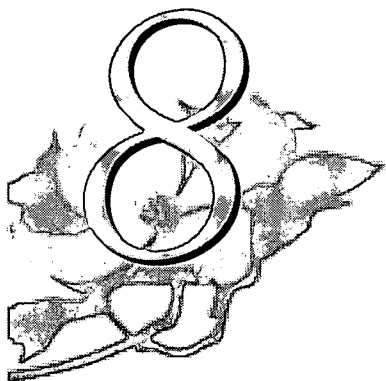
ENGLISH:

Reading/Literature and Research Test

GRADE EIGHT

On the grade 8 English: Reading/Literature and Research Test, students read a small number of reading selections and answer multiple-choice questions about these selections. The test includes a variety of types of reading, such as fiction, nonfiction, and poetry. Everyday text, such as instructions, may be used.

In the poem shown here, lines are numbered for students' reference.



RELEASED ▼ SELECTION

Everyone Under the Sun

I never knew a mountaintop
Until I saw the sea;
I never really knew a flower
Until I heard a bee.

5 I never knew a field of grass
Until I saw one blade;
I never knew the blazing sun
Until I felt the shade.

I never knew my inner self
10 'Til I looked out not in.
And then I saw the children all
With every color skin.

And all these different children
Were dancing round and round.
15 And what they shared in common
Was song and sky and ground.

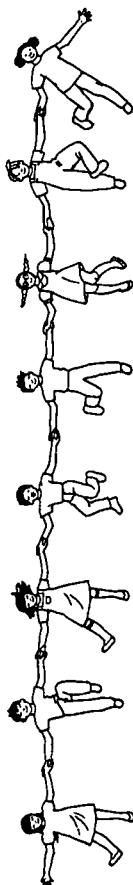
They sang about the mountaintops;
They sang about the sea.
They sang about the grass and sun
20 And every buzzing bee.

They sang about the brightest day
As well the darkest night.
They sang about what did not move
And what took off in flight.

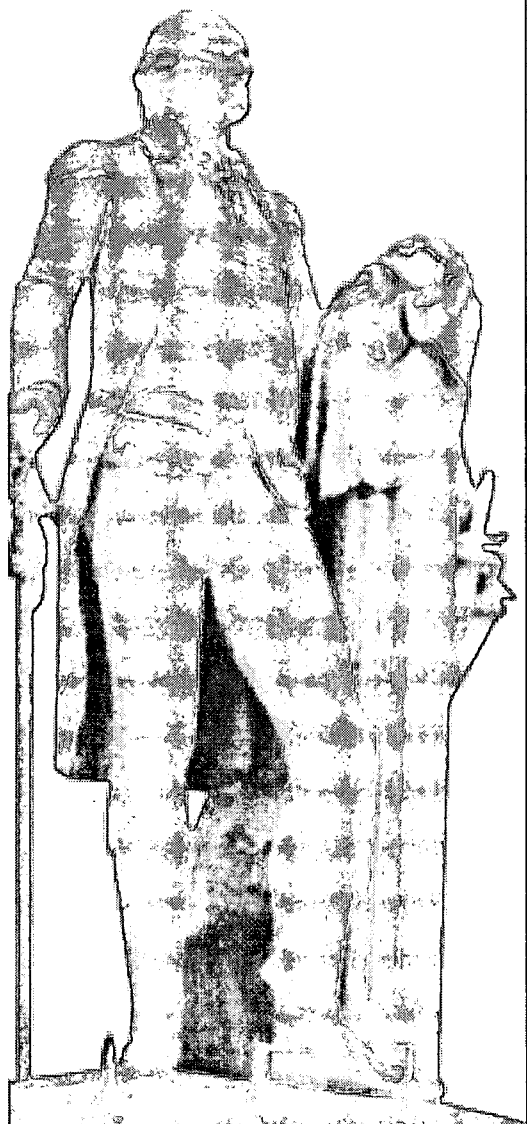
25 They sang about great riches;
Even more about the poor.
They sang of those who wanted less
And those who needed more.

They sang about the fast and slow,
30 The sturdy and the lame.
But my favorite part,
They sang from the heart:

We are different, but the same.



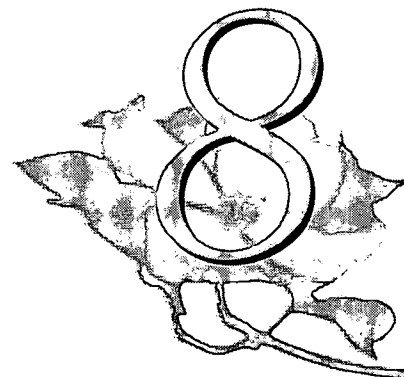
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ENGLISH: Reading/Literature and Research Test – continued

The questions on the grade 8 Reading test cover the English Standards of Learning for grades 6, 7, and 8. The questions accompanying the reading selection shown on page 6 are in the following Reporting Categories:

- Understand a Variety of Printed Materials/Resource Materials (questions 1, 2, and 3)
- Understand Elements of Literature (questions 4, 5, and 6)

GRADE EIGHT


RELEASED ▼ ITEMS

- 1 Which of these would *not* be an appropriate title for this poem?

A "Brothers and Sisters"
 B "We Are Family"
 C "A Universal Song"
 D "My Lifelong Dreams"

- 2 Which set of words from the first 4 stanzas has the same relationship as fast/slow in stanza 8?

F sea/bee
 G blazing sun/shade
 H self/skin
 J children/they

- 3 To find an anthology containing this poem, you should look under which classification?

A General Works
 B Philosophy
 C Language
 D Literature

- 4 The poem is built on a series of —

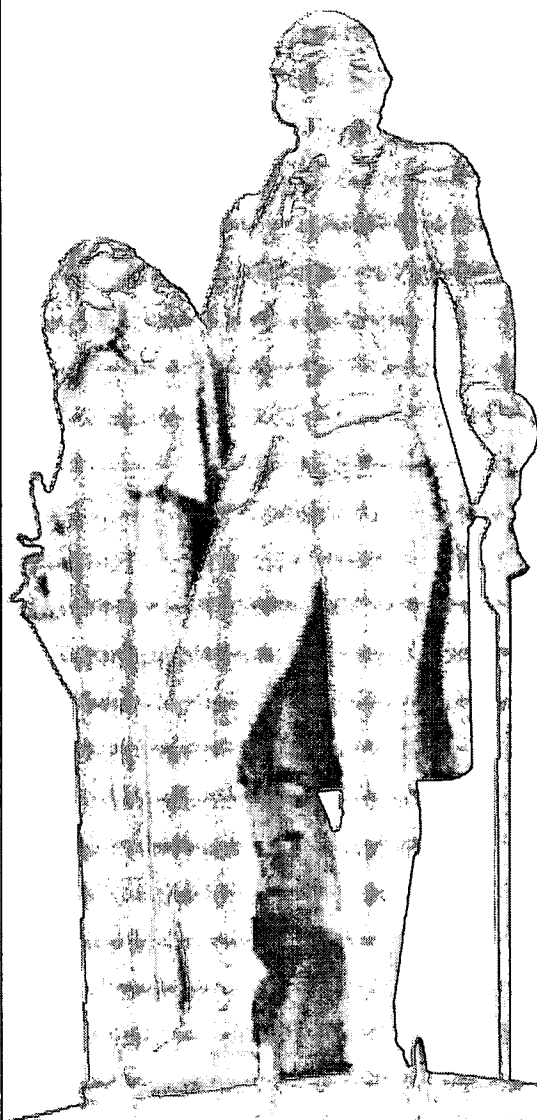
F contrasts
 G similarities
 H causes and effects
 J synonyms

- 5 Which stanza does *not* have the same rhyme pattern as the others?

A 2
 B 4
 C 6
 D 8

- 6 This poet *probably* hopes that the poem will help readers to become more —

F cautious
 G observant
 H musical
 J wealthy



GRADE EIGHT

ENGLISH: Writing Test

The grade 8 English: Writing test includes two components: a multiple-choice component and a direct writing component in which students write a composition about a topic presented to them in a writing prompt.

MULTIPLE-CHOICE COMPONENT

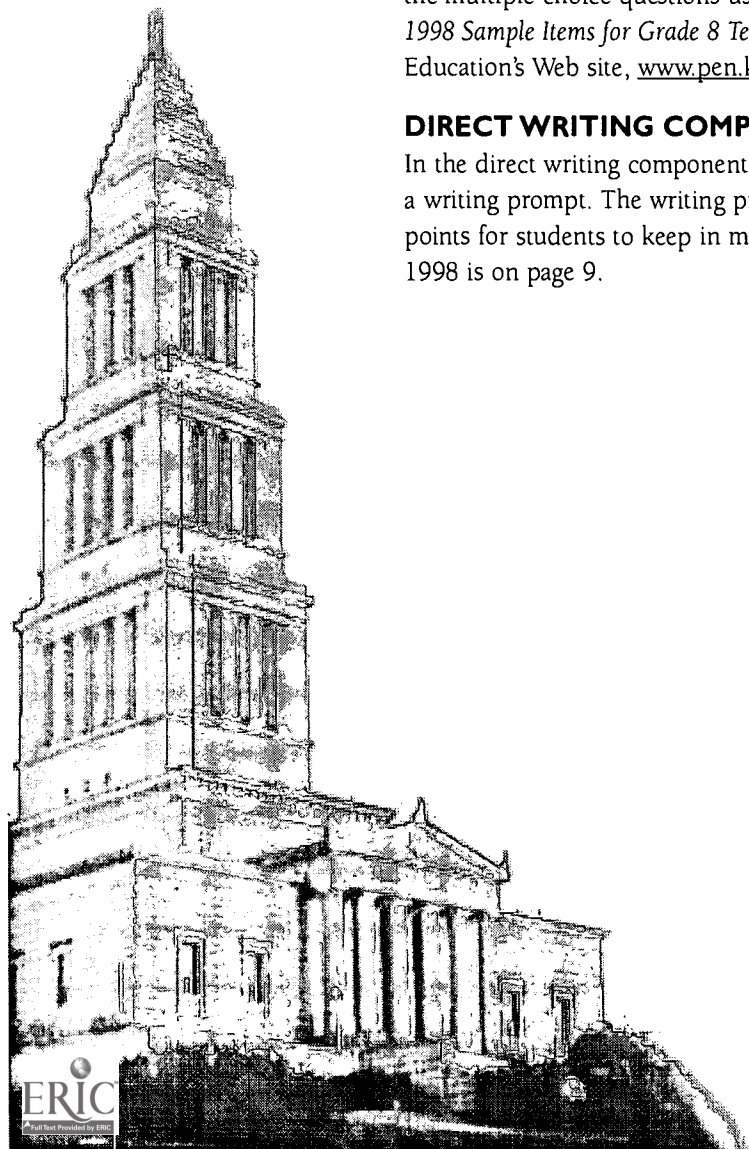
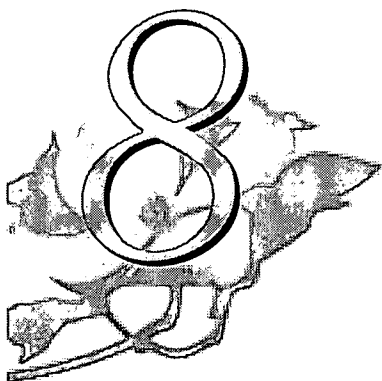
The questions included in the multiple-choice component are designed to mirror the process students follow as they write their own compositions. Students are presented with a writing task, followed by test questions that address activities students might pursue as they prepare to write. These questions are followed by a rough draft of a response to the writing task, written by a fictional student.

The rough draft is divided into two sections. The first section contains errors such as an incorrectly written sentence or two sentences that need to be combined. Test items that follow this section require the students to correct these errors by choosing the correct revision from the choices provided. The second section of the rough draft includes errors in grammar, capitalization, spelling, and punctuation. Items following this section refer to underlined words in the rough draft and require the student to choose the answer that includes correct grammar and mechanics. In some cases the underlined word or words will include no error, and the correct answer is "as it is."

Writing multiple-choice questions are not being released at this time for grade 8. Examples of the multiple-choice questions used on the Writing Test can be found, however, in the booklet *1998 Sample Items for Grade 8 Tests*. This booklet also is available on the Virginia Department of Education's Web site, www.pen.k12.va.us.

DIRECT WRITING COMPONENT

In the direct writing component, students write a composition about a topic presented to them in a writing prompt. The writing prompt page also includes a "Checklist for Writers" that lists points for students to keep in mind as they write. The writing prompt administered in Spring 1998 is on page 9.

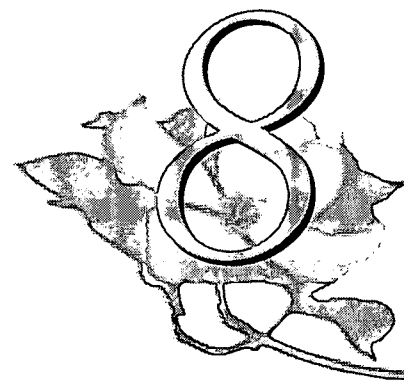


ENGLISH: Writing Test – continued

Writing compositions are scored on each of the following domains:

- Composing
- Written Expression
- Usage/Mechanics

Scores in the Composing and Written Expression domains are reported as part of the Reporting Category called Plan, Compose, and Revise Writing in a Variety of Forms for a Variety of Purposes. Scores in the Usage/Mechanics domain are reported as part of the Reporting Category called Edit for Correct Use of Language, Capitalization, Punctuation, and Spelling.

GRADE EIGHT


WRITING PROMPT ▼ PAGE

Grade 8

Prompt No.
897

Commonwealth of Virginia Standards of Learning Assessment

Think about a time when something funny happened to you or someone you know. Write about what happened.

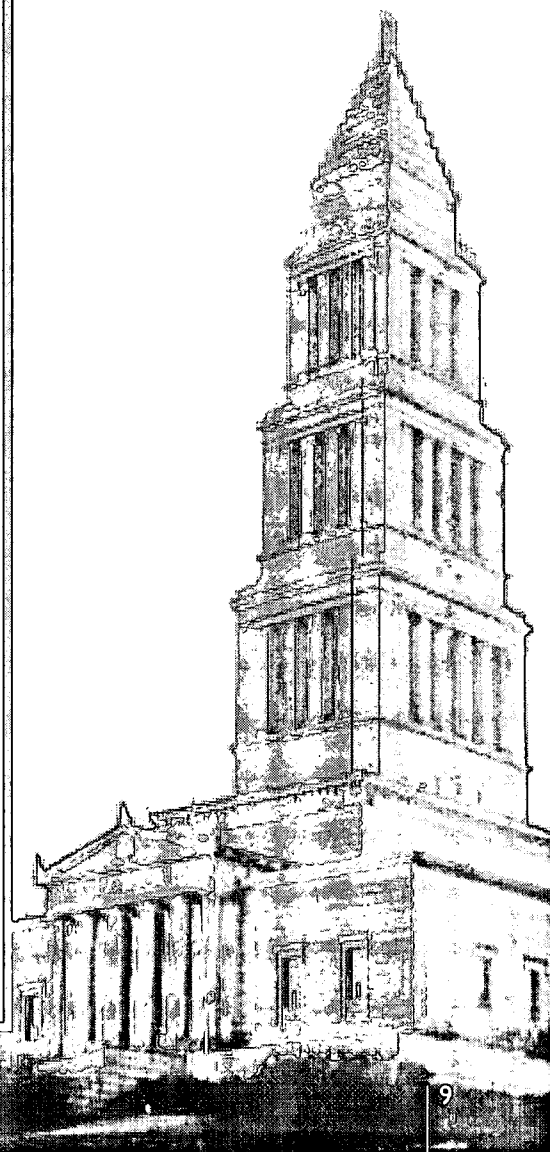
CHECKLIST FOR WRITERS

- _____ I planned my paper before writing it.
- _____ I revised my paper to be sure that
 - _____ the introduction captures the reader's attention;
 - _____ the central idea is supported with specific information and examples that will be interesting to the reader;
 - _____ the content relates to my central idea;
 - _____ ideas are organized in a logical manner;
 - _____ my sentences are varied in length;
 - _____ my sentences are varied in the way that they begin; and
 - _____ the conclusion brings my ideas together.
- _____ I edited my paper to be sure that
 - _____ correct grammar is used;
 - _____ words are capitalized when appropriate;
 - _____ sentences are punctuated correctly;
 - _____ words are spelled correctly; and
 - _____ paragraphs are clearly indicated.
- _____ I checked my paper.

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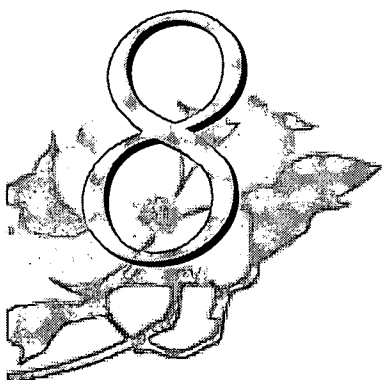


MATHEMATICS TEST

The questions on the grade 8 Mathematics test address the knowledge and skills contained in the Mathematics Standards of Learning for grades 6 through 8. As much as possible, "real-life" situations, as in Question 1, are used. Students are permitted to use calculators, rulers, and scratch paper on the test, and a sheet of mathematics formulas is provided.

The questions from the Spring 1998 test that are shown below and on the next page are in these Reporting Categories:

- Computation and Estimation (question 1)
- Measurement and Geometry (question 2)
- Probability and Statistics (question 3)
- Patterns, Functions, and Algebra (questions 4 and 5)



RELEASED ▼ ITEMS

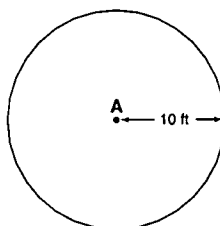
- 1 Diego makes 8% commission when he sells a car. If he sells a car for \$13,560, how much will his commission be?

A \$108.48
B \$1,084.80
C \$1,695.00
D \$10,848.00

- 3 Tamika and her brother played a board game with a number cube with sides numbered from 1 to 6. On her last roll, Tamika needed a 5 or greater to win the game. What is the probability she won the game?

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

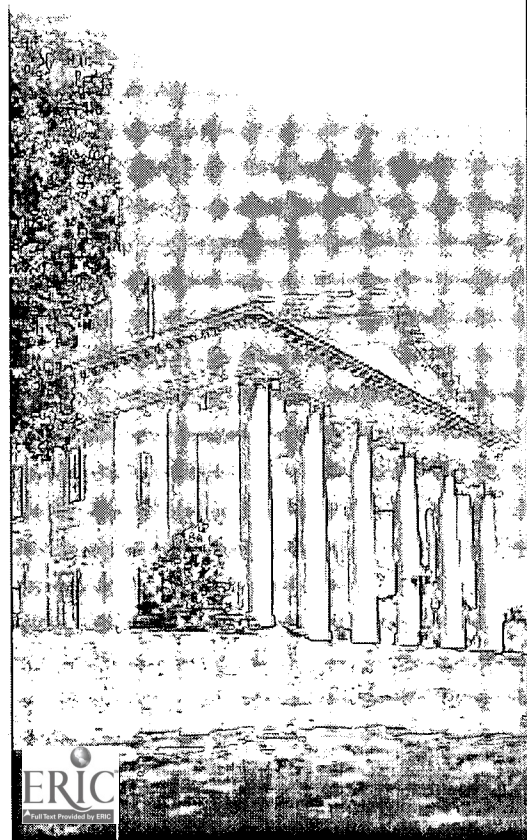
2



Point A is the center of the circle.
Which is closest to the circumference of the circle?

F 15.7 ft
G 31.4 ft
H 62.8 ft
J 314.1 ft

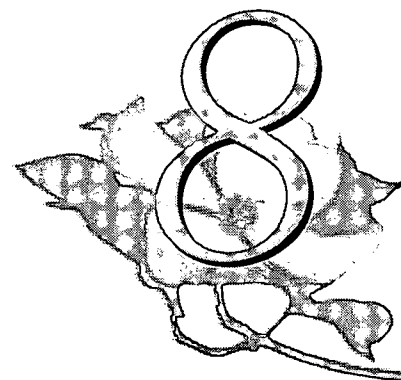
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MATHEMATICS TEST— continued

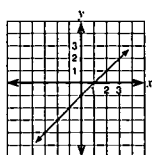
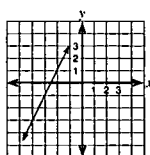
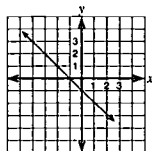
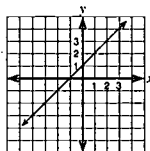
The remaining Reporting Category is Number and Number Sense, which includes such skills as comparing and ordering fractions, decimals, and percents, simplifying expressions, finding least common multiples and greatest common factors, and solving scale-model problems. Questions are not available for release from this category.

Questions 4 and 5 are in the Reporting Category of Patterns, Functions, and Algebra.

GRADE EIGHT

RELEASED ▼ ITEMS

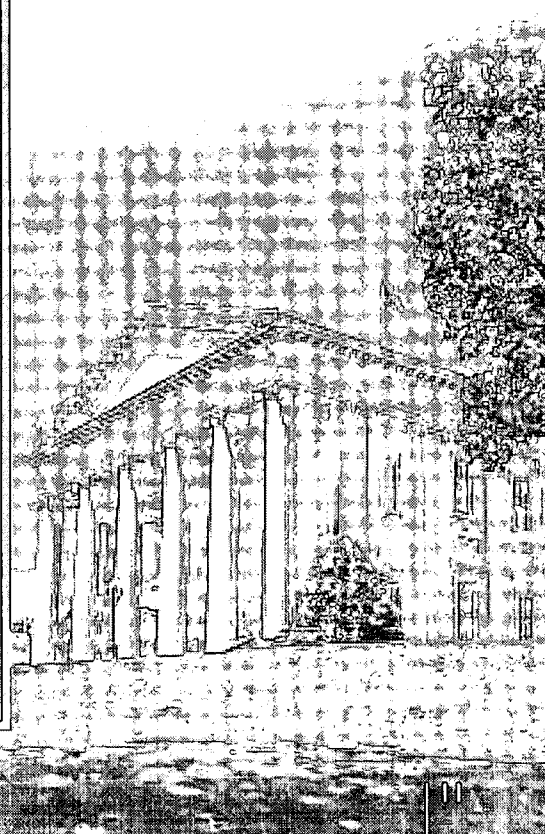
- 4 Which graph best represents the data in the table?

x	y
-4	-3
-2	-1
1	2
3	4


F

H

G

J

- 5 The length of a room is 3 feet more than twice the width. If x represents the width, which expression represents the length?

- A $2(x + 3)$
 B $2x + 3$
 C $x^2 + 3$
 D $2x - 3$

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HISTORY AND SOCIAL SCIENCE TEST

Students are asked questions testing their knowledge of history ranging from pre-colonial times through the twentieth century. The test measures the History and Social Science Standards of Learning for grades 5 through 7. Test questions are often presented with a map, graph, or chart, as in Question 2.

GRADE EIGHT

The questions that appear below are in these Reporting Categories:

- History: First Contact to 1877 (question 1)
- History: 1877 to the Present (question 2)
- Economics (question 3)

Test questions are not available to be released for the two remaining Reporting Categories, Geography and Civics. Geography includes knowledge of how landforms and climate affected colonial and frontier growth. Civics involves the principles and structure of both Virginia and national government.

RELEASED ▼ ITEMS

1 Both Frederick Douglass and William Lloyd Garrison were famous —

- A abolitionists
- B Civil War generals
- C members of the U.S. Senate
- D slave owners

2

Langston Hughes
Bessie Smith
Countee Cullen

Each of these Americans was known as a leader in the —

- F effort to reduce immigration to the United States
- G Progressive Movement
- H Harlem Renaissance
- J Fundamentalist Movement

3 Automobiles had been produced for over 20 years before Henry Ford produced the first Model T. How did Ford increase production and lower the cost of his automobiles?

- A Ford made extensive use of immigrant labor in his factories.
- B Ford used many different companies to produce his automobiles.
- C Ford used the assembly line to cut costs and production time.
- D Ford required all of his factories to use electricity rather than steam power.

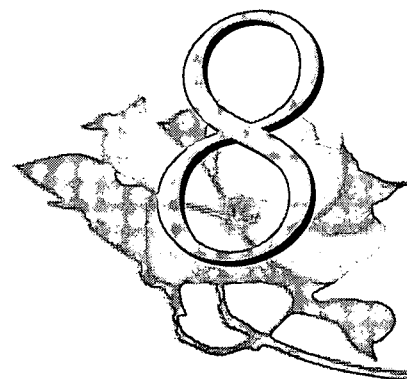
SCIENCE TEST

Using text and visual information such as graphs, tables, and illustrations, the questions on the grade 8 Standards of Learning Science test reflect what students do in an active science program. Questions 2 and 3, for example, are modeled on experiments that students would perform in the lab or classroom. Questions ask students to apply knowledge they have acquired in the classroom and/or use information that is in the question itself.

Students are permitted to use calculators and rulers on the grade 8 Science test.

The grade 8 Science questions that appear below and on the next page are in these Reporting Categories:

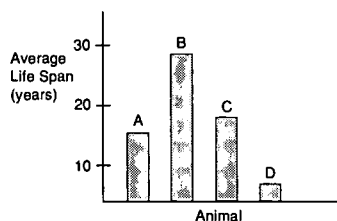
- Scientific Investigation (questions 1, 2, and 3)
- Force, Motion, Energy, and Matter (question 4)
- Ecosystems (questions 5 and 6)
- Earth and Space Systems (question 7)

GRADE EIGHT


RELEASED ▼ ITEMS

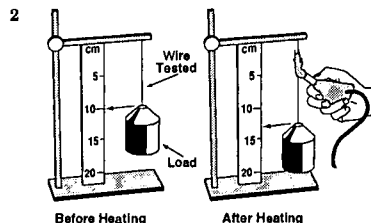
1

	Dog	Cow	Mouse	Horse
Average Life Span (years)	16	18	4	27
Resting Heart Rate (beats/minute)	90-100	45-60	448	48
Gestation (days)	61	284	21	330
Number of Blood Groups	7	12	4	9



Which point of the graph represents the average life span of the cow?

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



Type of Wire	Temperature of Wire (°C)	Load (g)	Length of Wire Before Heating (cm)	Length of Wire After Heating (cm)
Copper	100	25	10	11.8
Aluminum	100	25	10	12.4
Steel	100	25	10	10.3
Brass	100	25	10	10.8

The picture shows the results of an experiment used to find out how much different metals expand when heated to 100° C. Which variable change is *least* likely to change the results of this experiment?

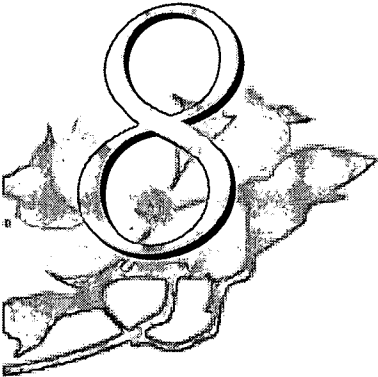
- F Adding a greater load
- G Increasing the diameter of the wires
- H Using a different type of wire
- J Using different heat sources

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SCIENCE TEST— continued

GRADE EIGHT



Questions are not available to be released for the final Reporting Category, Life Systems. Life Systems examines concepts of the structure and function of living things.

Question 3 is in the Reporting Category of Scientific Investigation. Question 4 is in the Reporting Category of Force, Motion, Energy, and Matter. Questions 5 and 6 are in the Reporting Category of Ecosystems. Question 7 is in the Reporting Category of Earth and Space Systems.

RELEASED ▼ ITEMS

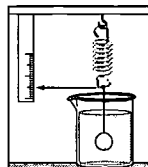
3

Material	Factors of Kinetic Friction
Rubber on concrete	0.80
Steel on steel	0.57
Aluminum on steel	0.47
Glass on glass	0.40
Wood on wood	0.20
Ice on ice	0.03

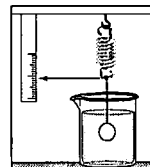
These data were collected by sliding different materials across various surfaces. The higher the factor of kinetic friction, the more force is required to keep an object moving. Based on this table, which slides the easiest?

- A Ice on ice
- B Rubber on concrete
- C Wood on wood
- D Steel on steel

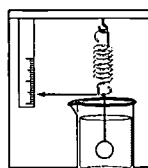
- 4 The pictures show the same marble placed in four different liquids. Which liquid would be easiest for a person to float in?



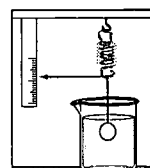
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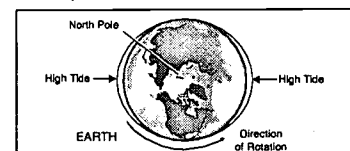
- 5 Which of these is a consumer-producer relationship?

- A Birds eating beetles
- B Hawks eating rabbits
- C Caterpillars eating tomatoes
- D Snakes eating frogs

- 6 The major contribution of mushrooms, bacteria, fungi, and other decomposers to a Virginia forest ecosystem is that they —

- F hold the soil in place
- G recycle nutrients
- H provide energy for producers
- J supply moisture for animals in the soil

7



The picture shows the high tides on Earth. How many high tides usually will occur at Virginia Beach during any 24-hour period?

- A One
- B Two
- C Three
- D Four

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COMPUTER/TECHNOLOGY TEST

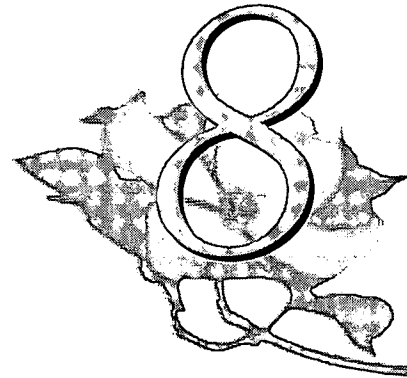
The questions in the grade 8 SOL Computer/Technology test present many "real-life" situations a student encounters when using a computer. The questions shown here are typical of students' experiences with word processing, spreadsheets, and research on the Internet. Students do not use computers for this test, and no question is written to be specific to any particular type of computer.

GRADE EIGHT

The grade 8 Computer/Technology questions that appear below are in these Reporting Categories:

- Understanding of Application Software (questions 1, 2, and 3)
- Understanding of Electronic Communications (question 4)

Questions are not available to be released from the remaining Reporting Category, Ability to Access, Retrieve, and Analyze Information. This category focuses on accessing and retrieving information from databases, encyclopedias, and other sources.



RELEASED ▼ ITEMS

- 1 Oscar wrote a report that has a sentence that needs to be moved to the end of the report. Which of the following is the *best* method of moving the sentence from the beginning of the report to the end?

- A Cut and paste
- B Highlight and insert
- C Search and replace
- D Copy and paste

2

	A	B	C
1	Computer	Application	Grades
2			
3	Exercise	Grade	
4			
5			
6	Problem 1	88	
7	Problem 3	80	
8	Problem 4	90	
9	Problem 5	100	
10			
11			

The entry in cell B7 is —

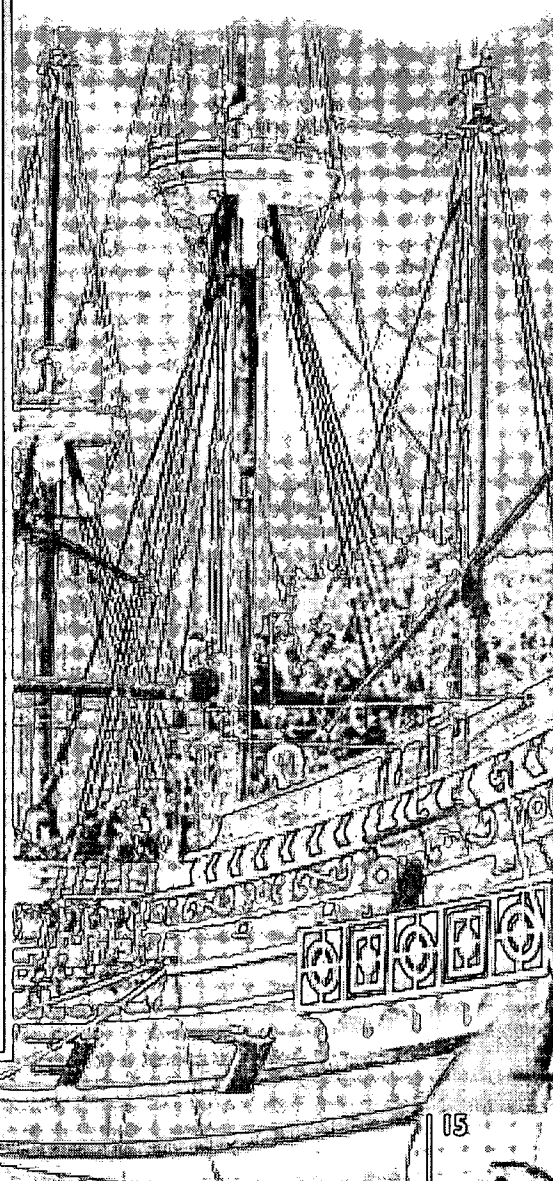
- F centered
- G highlighted
- H right aligned
- J left aligned

- 3 The process of placing a graphic or other object in a word processing document is referred to as —

- A scrolling
- B exporting
- C saving
- D pasting

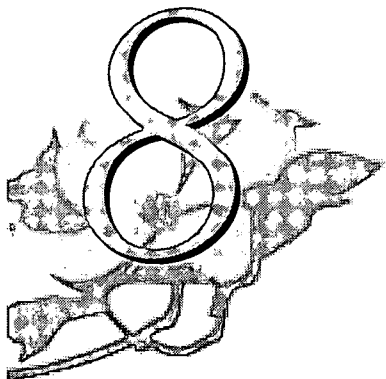
- 4 When Melissa was asked to help with the talent show costumes, she decided to look up designs on the Internet. Which piece of software creates the most user-friendly environment for her to explore the Internet?

- F E-mail
- G Web browser
- H Home page
- J Video connector



CORRECT ANSWERS

GRADE EIGHT



ENGLISH: *Reading/Literature and Research Test*

Page 7

1. D 2. G 3. D 4. F 5. D 6. G

MATHEMATICS TEST

Page 10

1. B 2. H 3. B

Page 11

4. J 5. B

HISTORY AND SOCIAL SCIENCE TEST

Page 12

1. A 2. H 3. C

SCIENCE TEST

Page 13

1. C 2. J

Page 14

3. A 4. J 5. C 6. G 7. B

COMPUTER/TECHNOLOGY TEST

Page 15

1. A 2. H 3. D 4. G

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