Reading and mathematics objectives measured by the eighth grade tests of the Georgia Criterion-Referenced Tests are described. This guide was designed to familiarize the teacher with assessment characteristics for each objective. Objectives in concept identification, component operations, and problem solving are defined for mathematics. All concepts and operations are examined in academic, everyday, and employment contexts. Similarly, in reading, objectives are defined for the areas of literal and inferential comprehension, and problem solving, in academic, everyday, and employment contexts. Examples of questions are provided for each objective and the assessment characteristics are defined to show the content required of the grade level. The strategies students may be using for incorrect options are outlined for each sample question.

(SLD)
FOREWORD

The Georgia criterion-referenced tests measure basic skills which Georgia educators have identified as essential for students to acquire for continued academic progress. In addition, the results of tests given to eighth graders are used to identify students who may need additional learning experiences before taking the High School Basic Skills Tests. The BSTs must be passed as part of the requirements to obtain a regular high school diploma. This document describes the reading and mathematics objectives measured by the eighth grade tests.

OVERVIEW OF TEST DEVELOPMENT

The development of test questions for the eighth grade tests begins after test content is specified by committees of teachers and curriculum specialists. Test specifications are incorporated in a set of writing guides used to train teachers from local school systems to write and edit test questions. These writing guides form the basis for this document.

Every question is field-tested. Only those questions that match objectives and are found to be statistically sound and free of bias can be used on the actual eighth grade test forms.

As part of the ongoing process of developing test questions for the eighth grade tests, the writing guides are reviewed and revised as needed. This document has been based on the latest refinement of test content recommended by teacher committees.

In order for teachers to design effective instruction and to promote good testing practices, it is important that they understand the range of content covered on the tests and the type of question formats that are used on the test. This document is designed to aid teachers in this task.

Table of Contents

<table>
<thead>
<tr>
<th>How to Use this Guide</th>
<th>ii</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATHEMATICS</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics Objectives</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Test Content</td>
<td>4</td>
</tr>
<tr>
<td>READING</td>
<td>48</td>
</tr>
<tr>
<td>Reading Objectives</td>
<td>49</td>
</tr>
<tr>
<td>Reading Test Content</td>
<td>50</td>
</tr>
</tbody>
</table>
HOW TO USE THIS GUIDE

This guide was designed to familiarize teachers with the eighth grade reading and mathematics CRT objectives. Each objective is described by:

**Assessment Characteristics.** This section lists the components of each objective and what content is appropriate for inclusion in this test.

**Examples for Objectives.** Every objective has sample questions that show each piece of content that can be tested. The sample questions are not intended to represent every possible format. The number of examples shown for an objective also does not reflect how many questions may appear on the tests. Some objectives simply have more parts than others.

**Strategies for Options.** For teachers' convenience, the notes in the column next to the response options are intended to explain why the particular group of incorrect options was selected for each test question. The notes describe inappropriate or incorrect strategies that students may have used in selecting the other options. For example,

\[
\begin{array}{c}
453 \\
- 129
\end{array}
\]

*(1) 324 \hspace{1cm} (1) * (Correct response)

(2) 334 \hspace{1cm} (2) Students might subtract correctly in the ones place but forget to borrow from the tens place.

(3) 336 \hspace{1cm} (3) Students might subtract the smaller from the larger digit in the ones place.

(4) 582 \hspace{1cm} (4) Students might misread the sign and add.

Strategies in the examples describe a limited number of possible errors that students could make. It would be inappropriate to limit consideration of errors only to those represented by the sample questions.

If you have questions about this document, contact the Division of Assessment, Georgia Department of Education.

These objectives represent only a portion of the reading and mathematics curriculum recommended for Georgia students. For further information, consult the documents entitled *Essential Skills for Georgia Schools* and *Basic Curriculum Content for Georgia’s Public Schools*, or contact the Division of General Instruction, Georgia Department of Education.
MATHEMATICS
EIGHTH GRADE CRITERION-REFERENCED TESTS
MATHEMATICS OBJECTIVES

Concept Identification

Objective 1: The student translates forms of rational numbers in an academic, everyday, or employment context.

Objective 2: The student identifies relations of numbers, properties of numbers, and properties of operations in an academic, everyday, or employment context.

Objective 3: The student identifies customary or metric units to measure length, area, volume, weight, time, and temperature in an academic, everyday, or employment context.

Objective 4: The student identifies relations and properties of sets of points in an academic, everyday, or employment context.

Component Operations

Objective 5: The student determines probabilities in an academic, everyday, or employment context.

Objective 6: The student computes with whole numbers, fractions, decimals, integers, and percents in an academic context.

Objective 7: The student applies formulas and units of measurement to determine length, area, volume, weight, time, temperature, and amounts of money in an academic, everyday, or employment context.

Problem Solving

Objective 8: The student selects appropriate operations for a given problem situation, and the reverse, in an academic, everyday, or employment context.

Objective 9: The student solves word problems in an academic, everyday, or employment context.

Objective 10: The student organizes data in an academic, everyday, or employment context.

Objective 11: The student interprets data which have been organized in an academic, everyday, or employment context.

Objective 12: The student estimates results in an academic, everyday, or employment context.
Skill Area: Concept Identification

Objective 1: The student translates forms of rational numbers in an academic, everyday, or employment context.

Assessment Characteristics:

- translates words to numerals (and the reverse)
- translates decimals to percents (and the reverse)
  Questions contain decimals less than one, but not smaller than thousandths. Percents are 100 or less; there are no percents with fractions.
- translates fractions to percents (and the reverse)
  Percents with fractions (33\frac{1}{3}) or terminating decimals or the percents 33.33% and 66.67% may be included. Students are not required to translate mixed numbers or percents over 100.
  When the question requires translating a percent into a fraction, the options are given in lowest terms.
- translates fractions to decimals (and the reverse)
  Questions may include mixed numbers of terminating or repeating decimals but not improper fractions or decimals smaller than thousandths.
  When a question requires translating a decimal to a fraction, the options are not necessarily in lowest terms.
  Fractions presented in the question do not have to be in lowest terms.

Features of numbers used in these questions:

- Fractions which may be included are halves, thirds, fourths, fifths, eighths, tenths, twelfths, hundredths; denominators with factors of a hundred may also be used.
- When rounded repeating decimals (e.g., .33 and .67) are used, the question asks "Which fraction is closest to ...?" Questions involving translating thirds to percents, use the wording "...is closest to ..." and use 33.33 and 66.67 as correct answers.
- Decimals may go up to thousandths.
- Whole numbers (up to seven digits) may be used.

- translates equivalent fractions
  Two types of questions are included:
  - simplifying fractions or
  - renaming involving mixed numbers.
  Translations do not require lengthy computation.
  Fractions are not necessarily presented in lowest terms.
- **Examples for Objective 1:**
  - **words to numerals**
    - Which is the correct way to write seventeen and three hundredths?
      - (1) 17,300
      - (2) 17.300
      - *(3)* 17.03
      - (4) 17.003

- **decimals to percents**
  - At Susan B. Anthony Middle School, 80% of the students ride the bus to school. Which shows 80% as a decimal number?
    - (1) 80.0
    - (2) 8.0
    - *(3)* .8
    - (4) .08

- **decimals to percents**
  - Which shows 4%?
    - (1) 4.0
    - (2) 0.4
    - *(3)* .04
    - (4) .004

- **fractions to percents**
  - Which fraction equals 45%?
    - *(1)* \(\frac{45}{100}\)
    - (2) \(\frac{4}{5}\)
    - (3) \(\frac{45}{55}\)
    - (4) \(\frac{5}{4}\)
### Examples for Objective 1:

#### Fractions to Decimals

$$\frac{3}{4} = \star$$

1. 5.75
2. 5.34
3. 5.25
4. 3.54

### Strategies for Options:

1. *
2. used digits of given number
3. decimal equivalent of another fraction
4. used digits of given number

#### Decimals to Fractions

Which is the same as 3.75?

1. \(\frac{7}{5}\)
2. \(\frac{3}{4}\)
3. \(\frac{5}{7}\)
4. \(\frac{1}{4}\)

1. used digits of given number
2. *
3. used digits of given number
4. confused \(\frac{1}{4}\) with \(\frac{3}{4}\)

#### Equivalent Fractions

Which is the same as \(2 \frac{3}{4}\)?

1. \(\frac{23}{4}\)
2. \(\frac{11}{4}\)
3. \(\frac{6}{4}\)
4. \(\frac{5}{4}\)

1. whole number and numerator become new numerator
2. *
3. \((2 \times 3) ÷ 4\)
4. \((2 + 3) ÷ 4\)
**Examples for Objective 1:**
equivalent fractions

Which is the same as \( \frac{9}{12} \)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>( \frac{2}{3} )</td>
</tr>
<tr>
<td>*(2)</td>
<td>( \frac{3}{4} )</td>
</tr>
<tr>
<td>(3)</td>
<td>( \frac{4}{7} )</td>
</tr>
<tr>
<td>(4)</td>
<td>( \frac{7}{10} )</td>
</tr>
</tbody>
</table>

**Strategies for Options:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>( \frac{2}{3} ) often confused with ( \frac{9}{12} )</td>
</tr>
<tr>
<td>(2)</td>
<td>*</td>
</tr>
<tr>
<td>(3)</td>
<td>( \frac{9-5}{12-5} )</td>
</tr>
<tr>
<td>(4)</td>
<td>( \frac{9-2}{12-2} )</td>
</tr>
</tbody>
</table>
Skill Area: Concept Identification

Objective 2: The student identifies relations of numbers, properties of numbers, and properties of operations in an academic, everyday, or employment context.

Assessment Characteristics:
Questions test the understanding of relations and properties, not computational ability.

- identifies relations of numbers
  Questions testing the relations of numbers may involve the following relations: *is a multiple of*, *is a factor of*, *is the same as*, *is greater than*, *is less than*.

  Questions testing relations may require the student to identify correctly ordered fractions, decimal numbers, or percents, but not a combination of two types.

  Fractions are limited to halves, thirds, fourths, fifths, sixths, eighths, tenths, twelfths, and hundredths; the denominator can also be factors of a hundred. Fractions may have different denominators and may include mixed numbers, but not improper fractions.

  Questions may include percents greater than 100%.

  Questions for this objective may involve proportional relationships.

- identifies properties of numbers
  Questions may require the student to identify factors and multiples of numbers, prime numbers, and even and odd numbers.

- identifies properties of operations
  Identity, associative, commutative, and distributive properties may be tested by requiring students to identify which mathematical sentence is always true or always false.

  The focus is on the use of the property in computation, not on computation.
**Examples for Objective 2:**

**relations of numbers**

Which is the largest number?

- (1) 0.29
- (2) 0.91
- (3) 0.092
- (4) 0.0019

**Strategies for Options:**

- (1) compares hundredths place
- (2) *
- (3) "92" is greatest number
- (4) most places after decimal

---

**relations of numbers**

\{(2,6), (3,9), (4,12)\}

If \((n, m)\) belongs to the relation above, then which is \(m\)?

- (1) \(n + 1\)
- (2) \(n + 4\)
- (3) \(n \times 3\)
- (4) \(n \times 2\)

**Strategies for Options:**

- (1) a typical relation
- (2) works for first pair only
- (3) *
- (4) correct operation but wrong multiplicand

---

**relations of numbers**

---

The picture is enlarged for the T-shirt so that the length increases from 10 to 30 centimeters. Which is the width of the enlargement?

- (1) 12 cm
- (2) 18 cm
- (3) 20 cm
- (4) 32 cm

**Strategies for Options:**

- (1) Width multiplied by 2 instead of 3
- (2) *
- (3) Length multiplied by 2
- (4) Perimeter
Examples for Objective 2:
relations of numbers
\{(1,1), (2,4), (3,12), (4,12)\}
If \((m,n)\) belongs to the relation above, which of the following would be true?

1. \(m\) is equal to \(n\)
2. \(m\) is greater than \(n\)
3. \(m\) is a factor of \(n\)
4. \(m\) is a multiple of \(n\)

Properties of numbers
Which is a prime number?

1. 6
2. 12
3. 1
4. 21

Properties of numbers
Which is an odd number?

1. an even number \(\times\) an odd number
2. an odd number \(\times\) an odd number
3. an even number \(\times\) an even number
4. an even number \(\times\) an odd number

Properties of numbers
Which is the set of multiples of 3 between 5 and 17?

1. \{5, 10, 15\}
2. \{8, 9, 12\}
3. \{6, 9, 12, 15\}
4. \{7, 10, 13, 16\}

Properties of operations
Which is NOT equal to 12 \(\times\) 13?

1. \((10 \times 13) + (2 \times 13)\)
2. \((10 \times 12) + (3 \times 12)\)
3. \((20 - 8) \times 13\)
4. \((10 \times 13) + 2\)

Strategies for Options:

1. true of first pair only
2. confused \(m\) and \(n\)
3. *
4. confused \(m\) and \(n\)
Examples for Objective 2:
properties of operations
Which is true for all numbers $n$?

(1) $n + 0 = 0$
(2) $n \times 0 = n$
(3) $n \times 1 = 1$
*(4) $n \div 1 = n$

Strategies for Options:

(1) misapplied additive identity
(2) misapplied multiplicative identity
(3) misapplied multiplicative identity
(4) *
Skill Area:  Concept Identification
Objective 3: The student identifies customary or metric units to measure length, area, volume, weight, time, and temperature in an academic, everyday, or employment context.

Assessment Characteristics:
- identifies units of length, area, volume, weight, time, and temperature

This objective involves choosing the type of unit or size of unit that applies to a specific measurement problem.

Students may be required to determine the precision of measurement required for a given problem situation and, then, to select the appropriate size unit for that degree of precision.

There are no conversions from metric to customary or the reverse. The prefixes *milli*-*, centi*-*, and *kilo*- may be used.

Appropriate units include:

<table>
<thead>
<tr>
<th>length</th>
<th>area</th>
<th>volume</th>
<th>weight</th>
<th>time</th>
<th>temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>square inch</td>
<td>pint</td>
<td>ounce</td>
<td>second</td>
<td>degrees Celsius</td>
</tr>
<tr>
<td>foot</td>
<td>square foot</td>
<td>quart</td>
<td>pound</td>
<td>minute</td>
<td>degrees Fahrenheit</td>
</tr>
<tr>
<td>yard</td>
<td>square yard</td>
<td>gallon</td>
<td>ton</td>
<td>hour</td>
<td></td>
</tr>
<tr>
<td>mile</td>
<td>square mile</td>
<td>liter</td>
<td>gram</td>
<td>day</td>
<td></td>
</tr>
<tr>
<td>meter</td>
<td>m²</td>
<td>ounce</td>
<td>week</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cm²</td>
<td>cu. in.</td>
<td></td>
<td>month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mm²</td>
<td>cu. ft.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cu. yd.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cm³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>mm³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Examples for Objective 3:**

**units of measure - appropriate unit**

Which unit of measurement should be used in weighing a penny?

(1) kilometer  
(2) kiloliter  
(3) liter  
*(4) gram

**units of measure - appropriate size of unit**

A school bus picks Stacy up each morning. The distance from home to school is most likely to be 10

(1) inches.  
(2) feet.  
(3) yards.  
*(4) miles.

**units of measure - appropriate unit**

The label on a can of paint describes the area it will cover. A gallon of paint will most likely cover 250

(1) cubic feet.  
*(2) square feet.  
(3) cubic miles.  
(4) miles.

**Strategies for Options:**

(1) measures length  
(2) measure of volume  
(3) measure of volume  
*(4)*

(1) unit of length is too small  
(2) unit of length is too small  
(3) unit of length is too small  
*(4)*

(1) incorrect unit  
(2) *  
(3) incorrect unit  
(4) incorrect unit
EIGHTH GRADE CRITERION-REFERENCED TESTS
MATHEMATICS TEST CONTENT

Skill Area:  Concept Identification
Objective 4:  The student identifies relations and properties of sets of points in an academic, everyday, or employment context.

Assessment Characteristics:
This objective focuses on the relationships between sets of points.

- identifies geometric relations
  Relations included are: inside, outside, parallel, perpendicular, similar, congruent, vertical, and horizontal. Relation concepts are not presented as vocabulary items.

- identifies geometric properties
  The geometric properties used are: the number of degrees in a right angle, circle, triangle, or rectangle and the relationships between sides (e.g., parallel) or among sides (e.g., has the same number of sides as) of figures.
  Students may be required to identify properties which do not change when figures are transformed by rotation, expansion, or reflection.
  Questions may deal with lines of symmetry.

- identifies geometric shapes in a drawing
  The drawings may include familiar objects or simple line drawings.
  Plane figures include: circles, triangles, rectangles, squares, points, lines, line segments, planes, parallelograms, and trapezoids. Solid figures include: cones, cubes, cylinders, spheres, and pyramids.

- classifies sets of points by characteristics
  Sets of points may be classified according to a specified dimension or feature, such as open/closed, plane/solid, or regular/irregular.

- identifies location of a set of points
  Given a graph or map, questions may ask students to
  - give the ordered pair of letters or numbers that locate a point or
  - identify the point that is named by a coordinate pair.
  Graphs may use all four quadrants.
Examples for Objective 4:

geometric relations

Strategies for Options:

geometric relations

On the map, which street appears to be parallel to Ivy?

(1) Oak
(2) Birch
(3) Maple
*(4) Walnut

geometric relations

A circle has a radius of 4 inches. All points which are a distance of 5 inches from the center of the circle are located

*(1) outside the circle.
(2) on the circle.
(3) inside the circle.
(4) at the center of the circle.
Examples for Objective 4: geometric relations

Which triangle is similar to the triangle above?

(1) \[
\begin{array}{c}
0
\end{array}
\]

(3) \[
\begin{array}{c}
0
\end{array}
\]

(2) \[
\begin{array}{c}
0
\end{array}
\]

(4) \[
\begin{array}{c}
0
\end{array}
\]

Strategies for Options:

(1) not similar

(2) *

(3) not similar

(4) not similar

geometric properties

Which is true of the cube above?

(1) Length of \( \overline{AB} \) > length of \( \overline{BC} \).

(2) Length of \( \overline{AB} \) < length of \( \overline{BC} \).

*(3) \( \overline{AB} \) is perpendicular to \( \overline{BC} \).

(4) \( \overline{AB} \) is parallel to \( \overline{BC} \).

(1) one side is not longer

(2) one side is not shorter

(3) *

(4) \( \overline{AB} \) is perpendicular to \( \overline{BC} \).
Examples for Objective 4:
- geometric properties

![Image of a cube]

The faces of a cube lie in how many planes?

<table>
<thead>
<tr>
<th>Option</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>4</td>
</tr>
<tr>
<td>* (2)</td>
<td>6</td>
</tr>
<tr>
<td>(3)</td>
<td>8</td>
</tr>
<tr>
<td>(4)</td>
<td>12</td>
</tr>
</tbody>
</table>

Strategies for Options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>number of edges in 1 plane</td>
</tr>
<tr>
<td>(2)</td>
<td>*</td>
</tr>
<tr>
<td>(3)</td>
<td>number of vertices</td>
</tr>
<tr>
<td>(4)</td>
<td>number of edges</td>
</tr>
</tbody>
</table>

geometric shapes in a drawing

The silo next to the barn is made up of which two solids?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) a cone and a sphere</td>
<td></td>
</tr>
<tr>
<td>* (2) a cone and a cylinder</td>
<td></td>
</tr>
<tr>
<td>(3) a cylinder and a sphere</td>
<td></td>
</tr>
<tr>
<td>(4) a cylinder and a pyramid</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) confused cylinder for sphere</td>
<td></td>
</tr>
<tr>
<td>* (2)</td>
<td></td>
</tr>
<tr>
<td>(3) confused cone for sphere</td>
<td></td>
</tr>
<tr>
<td>(4) confused cone for pyramid</td>
<td></td>
</tr>
</tbody>
</table>
Examples for Objective 4:
set of points by characteristics
Which does NOT contain a circle?

(1) cone
*(2) cube
(3) sphere
(4) cylinder

Strategies for Options:

(1) any intersection of a plane perpendicular to axis is a circle
(2) *
(3) any intersection of a nontangent plane is a circle
(4) any intersection of a plane parallel to base is a circle

location of a set of points

Which point is located at (-1, 2)?

(1) A
(2) B
(3) C
*(4) D
Examples for Objective 4:

identifies a point

Strategies for Options:

At which coordinates is the capital (★) located?

(1) (1,2)  (1) reversed coordinates, confused direction
* (2) (2,-1)  (2) *
(3) (-1,2)  (3) reversed the coordinates
(4) (-2,1)  (4) confused directions
Skill Area: Component Operations
Objective 5: The student determines probabilities in an academic, everyday, or employment context.

Assessment Characteristics:
Questions present a problem situation and ask the student to determine the likelihood of a specific event.
- determines probabilities
  Events with zero or one probability may be included.
  Probabilities are not presented as percents. Neither joint nor dependent events are used.
  Questions may require students to identify events that are most likely, least likely, or equally likely to occur, given a set of possible outcomes.
Examples for Objective 5:

probabilities

On the spinner above, which is the probability of getting a □?

(1) \(\frac{6}{8}\)

*(2) \(\frac{2}{8}\)

(3) \(\frac{2}{6}\)

(4) \(\frac{8}{2}\)

Strategies for Options:

(1) 1 - probability

(2) *

(3) 2:6 - odds of getting a square

(4) 1 ÷ probability

Probabilities

Jar A

3 red, 2 blue, 1 green

Jar B

4 red, 5 green

Jar C

5 red, 3 blue, 1 green

Jar D

7 red, 2 blue, 6 green

If a person drew a marble without looking, from which jar would a red marble MOST LIKELY be drawn?

(1) Jar A

(2) Jar B

*(3) Jar C

(4) Jar D

(1) 3/6 < 5/9

(2) 4/9 < 5/9

(3) *

(4) 7/15 < 5/9

21 4/4
Skill Area: Component Operations

Objective 6: The student computes with whole numbers, fractions, decimals, integers, and percents in an academic context.

Assessment Characteristics:
This objective measures the student’s ability to add, subtract, multiply, and divide using whole numbers, fractions, decimal numbers, integers, and percents. Test questions emphasize the correct use of an algorithm rather than lengthy computation.

The following types of numbers or problems are appropriate:

- **computes using whole numbers**
  - Addition and subtraction problems requiring regrouping
  - Multiplication problems with the total number of digits for factors less than seven (1 digit by 5 digits, 2 digits by 4 digits, 3 digits by 3 digits)
  - Division problems with a divisor of 2 digits or less
  - Division problems with dividends not exceeding 5 digits
  - Division problems whose quotients contain a zero
  - Division problems that require the annexation of zero
  (Questions will not use the square root algorithm.)

- **computes using fractions**
  - Mixed numbers but not improper fractions
  - Fractions with like and unlike denominators
  - Fractions that are not necessarily in reduced form

- **computes using decimal numbers**
  - Decimals that are not less than thousandths
  (These questions focus on the correct placement of the decimal.)

- **computes using integers**
  (These questions focus on knowing the correct sign (+ or −) to use with the result.)

- **computes using percents**
  - Finding the percentage, rate, or base for percent problems
  - Percents that are between 1 and 100 inclusive
  (Percents of increase or decrease problems are not included.)
Examples for Objective 6:

Whole numbers

261
\times 503

(1) 251,483

(2) 131,283

(3) 101,183

(4) 13,833

Fractions

\[ \frac{3}{5} + \frac{2}{3} = \]

(1) \( \frac{8}{3} \)

(2) \( \frac{3}{8} \)

(3) \( \frac{13}{15} \)

(4) \( \frac{13}{30} \)

Decimals

5 - 1.35 =

(1) 0.0365

(2) 0.365

(3) 3.65

(4) 36.50

Integers

-8
\times -7

(1) -56

(2) -15

(3) +15

(4) +56

Percent

Which is 40% of 200?

(1) 5

(2) 8

(3) 80

(4) 160

Strategies for Options:

(1) added 1 to 2 before multiplying (3 \times 2) and added 3 to 2 before multiplying (5 \times 2)

(2) *

(3) didn’t carry.

(4) 261 \times 53--forgot zero

(1) added top and bottom:
\[ 1 + 2 = 3 \]
\[ 5 + 3 = 8 \]

(2) got common denominator but added 1 + 2

(3) *

(4) got common denominator but then added

(1) placed decimal too far to left

(2) placed decimal too far to left

(3) *

(4) placed decimal too far to right

(1) multiplied but confused on sign

(2) added

(3) added but confused on sign

(4) *
Skill Area: Component Operations

Objective 7: The student applies formulas and units of measurement to determine length, area, volume, weight, time, temperature, and amounts of money in an academic, everyday, or employment context.

Assessment Characteristics:

- applies units of measurement to determine length, area, volume, weight, time, and temperature

Real life situations (e.g., vocational education) may be used. All test questions are restricted to real numbers and may require rounding. Graphics may be used.

Conversions will be within the same system of measurement (i.e., no metric to customary, or the reverse).

Days and leap years may be measured as well as the time zone changes in the U.S.

A scale of measurement may be presented for the student to apply. The prefixes milli-, centi-, or kilo- are suitable. Nonstandard units of measurement also may be used.

Appropriate units for this objective include:

<table>
<thead>
<tr>
<th>length</th>
<th>area</th>
<th>volume</th>
<th>weight</th>
<th>time</th>
<th>temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>square inch</td>
<td>pint</td>
<td>ounce</td>
<td>second</td>
<td>degrees Celsius</td>
</tr>
<tr>
<td>foot</td>
<td>square foot</td>
<td>quart</td>
<td>pound</td>
<td>minute</td>
<td>degrees Fahrenheit</td>
</tr>
<tr>
<td>yard</td>
<td>square yard</td>
<td>gallon</td>
<td>ton</td>
<td>hour</td>
<td></td>
</tr>
<tr>
<td>mile</td>
<td>square mile</td>
<td>liter</td>
<td>gram</td>
<td>day</td>
<td></td>
</tr>
<tr>
<td>meter</td>
<td>m²</td>
<td>ounce</td>
<td>week</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cm²</td>
<td>cu. in.</td>
<td>cu. ft.</td>
<td>month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mm²</td>
<td>cu. yd.</td>
<td>m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- applies formulas

These questions ask the student to find simple interest, distance/rate, miles per gallon, perimeter, or area (using rectangles, triangles, or circles), volume (using rectangular solids), weight, time, temperature, or amount of money.
applies formulas (cont.)

Also appropriate are questions requiring the student to solve simple geometric problems, either directly, by using ratios of similar polygons, or by applying the Pythagorean theorem.

Formulas may or may not be present in the questions. (Simple formulas such as area and perimeter of triangles and rectangles are usually not provided.)

Questions determining amounts of money may involve:
 - counting money
 - making change
 - solving problems using money.

Making change can be done by counting, subtracting or determining the least number of coins required for a specific amount.

Questions may involve computation as well as recognition of the amount of money shown.

Problems requiring sales tax or discount computations are included.

Half-dollars, silver dollars and two-dollar bills are not used, nor are denominations greater than twenty.
Examples for Objective 7:
units of length
Which is the number of inches in 2'3"?

(1) 5
(2) 23
*(3) 27
(4) 38

Strategies for Options:
(1) added 2 + 3
(2) 2(10) + 3
(3) *
(4) 3(12) + 2

units of area

Which is the area of the figure above in square inches?

(1) 35 square inches
(2) 70 square inches
(3) 125 square inches
*(4) 250 square inches

Strategies for Options:
(1) (25 + 10)
(2) (2 x 35)
(3) \( \frac{1}{2}(25 \times 10) \)
(4) *

units of capacity
Which is the number of pints in 4 quarts?

(1) 1
(2) 2
*(3) 8
(4) 16

Strategies for Options:
(1) a pint is half a quart
(2) 2 pints = 1 quart
(3) *
(4) confused cups with pints

units of weight
Which shows the number of kilograms in 425 grams?

*(1) 0.425
(2) 4.25
(3) 4250
(4) 42500

Strategies for Options:
(1) *
(2) 425 divided by 100
(3) 425 multiplied by 10
(4) 425 multiplied by 100
Examples for Objective 7:

units of time

Chris is to have a 5-pound roast ready by 7:00 p.m. If the roast needs to cook 30 minutes per pound, what time should Chris start cooking it?

(1) 2:00 p.m
(2) 4:30 p.m.
(3) 5:10 p.m.
(4) 9:30 p.m.

(1) subtracted 5
(2) *
(3) $5 \times 30 = 150$ min. (1 hr. 50 min.)
(4) added 2 1/2 hrs.

units of temperature

If the temperature goes down 20 degrees below that shown on the thermometer, the temperature will be

(1) 35° above zero
(2) 20° above zero
(3) 5° below zero
(4) 20° below zero

(1) added 20
(2) used number given
(3) *
(4) used number given
Examples for Objective 7:

*formulas*

$distance = rate \times time$

In the 1960 Olympics, Wilma Rudolph won the 100-meter race in 11 seconds. What was her approximate rate in meters per second?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(1)</em></td>
<td>9</td>
</tr>
<tr>
<td>(2)</td>
<td>89</td>
</tr>
<tr>
<td>(3)</td>
<td>110</td>
</tr>
<tr>
<td>(4)</td>
<td>1100</td>
</tr>
</tbody>
</table>

Strategies for Options:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(1)</em></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>100 - 11</td>
</tr>
<tr>
<td>(3)</td>
<td>11 x 10</td>
</tr>
<tr>
<td>(4)</td>
<td>11 x 100</td>
</tr>
</tbody>
</table>

formulas

Paul bought groceries that cost $8.47 and paid with a $10 bill. Which could be his correct change?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) two pennies, two dimes, one quarter, one dollar bill</td>
<td></td>
</tr>
<tr>
<td><em>(2)</em> three pennies, two quarters, one dollar bill</td>
<td></td>
</tr>
<tr>
<td>(3) two pennies, two dimes, one quarter, two dollar bills</td>
<td></td>
</tr>
<tr>
<td>(4) three pennies, two quarters, two dollar bills</td>
<td></td>
</tr>
</tbody>
</table>

formulas

In the triangle above, which is the length of side PQ?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(1)</em></td>
<td>10</td>
</tr>
<tr>
<td>(2)</td>
<td>12</td>
</tr>
<tr>
<td>(3)</td>
<td>14</td>
</tr>
<tr>
<td>(4)</td>
<td>24</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(1)</em></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>6 + 6</td>
</tr>
<tr>
<td>(3)</td>
<td>6 + 8</td>
</tr>
<tr>
<td>(4)</td>
<td>$\frac{1}{2}(6 \times 8)$</td>
</tr>
</tbody>
</table>
Examples for Objective 7: formulas

Strategies for Options:

Which is the area of the shaded region in square inches?

1. 20
2. 22
3. 32
4. 40

(1) \( * \)
(2) \( 10 + 8 + 4 \)
(3) \( (8 \times 4), \) used incorrect formula \( (A = bh) \)
(4) \( A = \frac{1}{2} (8 \times 10), \) used wrong height
Skill Area: **Problem Solving**

Objective 8: The student selects appropriate operations for a given problem situation, and the reverse, in an academic, everyday, or employment context.

**Assessment Characteristics:**

The student is asked to choose the steps needed to solve a problem or to select a statement of a problem situation for a given set of operations.

- **selects appropriate operations**
  These problems use word problems in the stem but ask the student to select the way the problem should be solved rather than the correct answer.

- **selects situations for operations**
  No more than three arithmetic operations are combined to solve a problem.
  The steps may or may not be written as mathematical expressions.
  These problems may include whole numbers, fractions, decimals, and percents in combination. Computation is minimal.
  When questions require identification of a problem situation (see example, pg. 31), options do not require unnecessarily fine distinctions. Options may all be variations of the same problem situation. The amount of reading in options is limited.
**Examples for Objective 8:**

**appropriate operations**

A park has 25 boats to rent. Enough boats are rented for 18 students to ride 2 in each boat. Which shows how many boats are left?

1. \((18 \times 2) - 25\)
2. \((18 \div 2) + 25\)
3. \((25 - 18) \div 2\)
4. \(25 - (18 \div 2)\)

**Strategies for Options:**

1. multiplied instead of divided and confused subtrahend and minuend
2. added to 25 instead of subtracted
3. subtracted before dividing
4. *

**appropriate operations**

Kate works 3 hours on each of 4 afternoons a week. If she earns 48 dollars for the week, which shows how many dollars she earns per hour?

1. \(48 \div (3 \times 4)\)
2. \(48 \div (3 + 4)\)
3. \((3 \times 4) \div 48\)
4. \((3 + 4) \div 48\)

**situations for operations**

If student tickets cost $.50 each and adult tickets cost $1.50, then the sentence \((3 \times .50) + (2 \times 1.50)\) represents the total cost of

1. 3 student tickets and 2 adult tickets.
2. 3 adult tickets and 2 student tickets.
3. 150 student tickets and 300 adult tickets.
4. 5 tickets at $2.00 each

**situations for operations**

\[
\frac{50 + 90 + 100}{3} = 80
\]

Which is an interpretation of the above number sentence?

1. 80 is the average of 50, 90, and 100.
2. 3 is the average of 50, 80, 90, and 100.
3. 80 is the average of 3, 50, 90, and 100.
4. 100 is the average 50, 80, and 90.

Numbers from the problem were rearranged.
Skill Area: Problem Solving

Objective 9: The student solves word problems in an academic, everyday, or employment context.

Assessment Characteristics:

- solves word problems

  Problem solutions may involve several operations performed in a specified or implied sequence with two or more steps. The multiple steps are integral parts of a realistic solution strategy and may:
  - estimate measurements as part of a task's solution but not as a final step
  - use formulas
  - determine amounts of money
  - use geometric figures
  - use scale drawings
  - use unit pricing ("better buys" in retail stores).

  Some questions may require judgments about the appropriateness of alternative solution strategies.

  Questions may require recognizing basic ideas related to quantifiers, e.g., all, some, none.

  Questions may require recognizing logical conclusions, e.g., all A's are B's; all B's are C's; therefore, all A's are C's.

  Other problems may simply require identifying a correct solution procedure described in words rather than numbers.

  Solutions may require information that is reasonably assumed to be common knowledge, e.g., that there are 12 months in a year.

  Computation and reading level are kept simple.
Examples for Objective 9:

word problems

A car travels 3 kilometers in 2 minutes. At the same rate, which will be the time, in minutes, it will take to travel 12 kilometers?

(1) 4
(2) 6
*(3) 8
(4) 18

Strategies for Options:

(1) \( \frac{12}{3} = 4 \)
(2) \( 3 \times 2 = 6 \)
*(3) *
(4) \( \frac{2}{3} :: 12 : 18 \)

word problems

1. If an animal is a horse, then it has 4 legs.
2. Rusty has 4 legs.

If the statements above are true, which is also true?

(1) Rusty is a horse.
*(2) Rusty could be a horse.
(3) Rusty is not a horse.
(4) Rusty could not be a horse.

Strategies for Options:

(1) Arguing from converse
(2) *
(3) Opposite of (1)
(4) Opposite of (2)

word problems

A group of 130 eighth and ninth grade students went on a field trip. Almost \( \frac{1}{3} \) of them were eighth graders. Which is most likely the number of ninth graders on the trip?

(1) 40
(2) 65
*(3) 90
(4) 390

Strategies for Options:

(1) about \( \frac{1}{3} \) of 130
(2) \( \frac{1}{3} \times 130 \)
*(3) *
(4) \( 3 \times 130 \)
Examples for Objective 9:
word problems

Strategies for Options:

A fence made using two kinds of posts marked X and Y is set up as shown above. The shortest distance between an X post and a Y post is always 2 feet, and the shortest distance between two Y posts is always 1 foot. Which is a 20-foot fence of this type?

*(1)  

(1) *

(2) Only 18 feet

(3) Only 15 feet

(4) Only 13 feet
Examples for Objective 9:

- word problems

Henry filled his car's gas tank full and then stopped after he had driven 266 miles to refill the tank. Henry forgot to write down the number of gallons that he bought but remembered that the gas cost 87.9¢ per gallon and that he had spent $8.35. About how many miles per gallon did he average on his trip?

Strategies for Options:

1. \(266 \div (87.9 \div 8.35)\)
2. \*(2) *
3. \(835 \div 26.6\)
4. \(266 \div 8.35\)

(1) 25.3
* (2) 28.0
(3) 31.4
(4) 31.9
EIGHTH GRADE CRITERION-REFERENCED TESTS
MATHEMATICS TEST CONTENT

Skill Area: Problem Solving
Objective 10: The student organizes data in an academic, everyday, or employment context.

Assessment Characteristics:
This objective focuses on collecting and organizing data to help solve a problem. Test questions may involve extraneous data.

- organizes data into tables and charts
- organizes data into graphs and diagrams

These types of problems present a set of data and ask the student to select the best organization of that data. The data may be arranged in tables, charts, bar graphs, line graphs, circle graphs, pictographs, Venn diagrams, or flow charts. Graphs may be labeled incorrectly or have missing information. Some interpretation may be required.

- collects data

Questions ask the student to identify additional information necessary to solve the problem or which questions to use when collecting data for a specified task. Questions may require the student to identify an appropriate sample for data collection.

Examples for Objective 10:

The principal of Georgia Junior High needs to know the approximate number of students who will be buying their lunches in the school cafeteria. To get an estimate, he will survey a small sample group of the student population. Which sample group would be most representative of the population for this survey?

(1) the boys in grade 8  (1) biased towards males & 8th graders
(2) the girls in grades 7 and 9  (2) biased towards females & 7th and 9th graders
(3) all of grade 7  (3) biased towards 7th
*(4) one section from each grade  (4) *

Strategies for Options:
Examples for Objective 10:
data into tables and charts

**Sales of Widgets**

<table>
<thead>
<tr>
<th>City</th>
<th>Person</th>
<th>Widgets Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>Asher</td>
<td>42</td>
</tr>
<tr>
<td>Savannah</td>
<td>Brown</td>
<td>26</td>
</tr>
<tr>
<td>Macon</td>
<td>Jones</td>
<td>32</td>
</tr>
<tr>
<td>Atlanta</td>
<td>Felden</td>
<td>25</td>
</tr>
<tr>
<td>Valdosta</td>
<td>Garcia</td>
<td>34</td>
</tr>
<tr>
<td>Macon</td>
<td>Mooney</td>
<td>21</td>
</tr>
<tr>
<td>Valdosta</td>
<td>Smith</td>
<td>14</td>
</tr>
<tr>
<td>Savannah</td>
<td>Tower</td>
<td>31</td>
</tr>
</tbody>
</table>

Which table correctly shows the total number of widgets sold in each city?

1. *(1)*

<table>
<thead>
<tr>
<th>City</th>
<th>Number Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>67</td>
</tr>
<tr>
<td>Macon</td>
<td>53</td>
</tr>
<tr>
<td>Savannah</td>
<td>57</td>
</tr>
<tr>
<td>Valdosta</td>
<td>48</td>
</tr>
</tbody>
</table>

2. *(2)*

<table>
<thead>
<tr>
<th>City</th>
<th>Number Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>42</td>
</tr>
<tr>
<td>Macon</td>
<td>32</td>
</tr>
<tr>
<td>Savannah</td>
<td>26</td>
</tr>
<tr>
<td>Valdosta</td>
<td>34</td>
</tr>
</tbody>
</table>

3. *(3)*

<table>
<thead>
<tr>
<th>City</th>
<th>Number Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>53</td>
</tr>
<tr>
<td>Macon</td>
<td>67</td>
</tr>
<tr>
<td>Savannah</td>
<td>57</td>
</tr>
<tr>
<td>Valdosta</td>
<td>48</td>
</tr>
</tbody>
</table>

4. *(4)*

<table>
<thead>
<tr>
<th>City</th>
<th>Number Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>53</td>
</tr>
<tr>
<td>Macon</td>
<td>67</td>
</tr>
<tr>
<td>Savannah</td>
<td>48</td>
</tr>
<tr>
<td>Valdosta</td>
<td>57</td>
</tr>
</tbody>
</table>
Examples for Objective 10:
data into graphs and diagrams
All snakes are reptiles. All alligators are reptiles. No snakes are alligators. Which diagram shows these statements?

(1) confused "no" with "some"

(2) *

(3) confused "some" with "all"

(4) confused "no" (snakes) with "all" (snakes) and "all" (alligators) with "some"
Examples for Objective 10: data into graphs and diagrams

The budget for the Whittleton Company is 35% salaries, 25% office rent, 15% equipment maintenance, 15% supplies, and 10% miscellaneous. Which graph correctly shows these proportions?

(1) evenly divided

(2) proper proportions but incorrect entries

(3) *

(4) confused % with degrees
Skill Area: Problem Solving

Objective 11: The student interprets data which have been organized in an academic, everyday, or employment context.

Assessment Characteristics:
The required reading level is kept low.

- interprets data in tables and charts
- interprets data in graphs and diagrams

These questions focus on using information to solve a problem. Data may be presented in tables, charts, maps, circle graphs, bar graphs, line graphs, pictographs, Venn diagrams, or flow charts.

Questions represent varying levels of complexity, from reading a graph to drawing inferences from the data, such as:
- synthesizing information
- making predictions
- identifying a relationship or rule
- interpolating within the range of the data
- extrapolating beyond the range of the data
- identifying or summarizing a trend.

- finds mean, median, mode or range

If the student is asked to find the mean, the data are selected so that the mean will always be a whole number and so that the concept of mean, not the skill of addition, is being tested.

If the student is asked to find the median, there will be an odd number of elements in the data set.

Bi-modal distributions are excluded.

The "range" is defined as the difference between the greatest and least scores. Answer choices for range items are not expressed in intervals (e.g., for the sample problem on page 43, the range would be 60).

Test questions may require the student to apply these statistics.
Examples for Objective 11: data in tables and charts

Reliable Equipment Rental

<table>
<thead>
<tr>
<th>Tool</th>
<th>First 2 Hours</th>
<th>Each Additional Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Drill</td>
<td>$ 5.00</td>
<td>$2.00</td>
</tr>
<tr>
<td>Electric Saw</td>
<td>$ 8.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Carpet Shampooer</td>
<td>$15.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>Lawn Mower</td>
<td>$10.00</td>
<td>$4.00</td>
</tr>
</tbody>
</table>

How much would it cost Susan to rent an electric saw for 5 hours?

(1) $ 8.00
(2) $11.00
*(3) $17.00
(4) $25.00

(1) first 2 hours only
(2) first 3 hours only
(3) *
(4) $(8 \times 2) + (3 \times 3)$
Examples for Objective 11: data in graphs

Between which two hours did Ed show the greatest increase in his temperature?

(1) 5:00 and 6:00  (1) first large rise
(2) 7:00 and 8:00  (2) greatest decrease
*(3) 8:00 and 9:00  (3) *
(4) 10:00 and 11:00  (4) highest temperature

How many times did Ed's temperature drop below that of the hour before?

(1) 1  (1) too few
*(2) 2  (2) *
(3) 3  (3) too many
(4) 4  (4) too many
### Examples for Objective 11:

**mean, median, mode or range**

**Paul’s Test Scores**

<table>
<thead>
<tr>
<th>95</th>
<th>80</th>
<th>85</th>
<th>35</th>
<th>35</th>
</tr>
</thead>
</table>

†The RANGE of Paul’s test scores is

1. 35
2. 45
*(3)* 60
4. 80

†The MEAN of Paul’s test scores is

1. 35
2. 66
*(3)* 80
4. 85

†Note: both of these items would not be used on the same test, since they are not independent.

### Strategies for Options:

1. lowest score
2. 80-35
*(3)*  *
4. median

(1) mode
*
3. median
(4) middle score on graph
Skill Area: Problem Solving
Objective 12: The student estimates results in an academic, everyday, or employment context.

Assessment Characteristics:
This objective focuses on the use of estimation in the planning stages of problem solving. Outcomes may be qualitative as well as quantitative.

- estimates results

When a student is asked to estimate a result, the method of estimation should be given. Numbers in problems are deliberately large to discourage students from calculating the results and then estimating. The closest option is not necessarily the best estimate.

Questions may require the estimation of the number of units contained in a 1, 2, or 3-dimensional figure and may use non-standard, as well as standard, units of measurement.

If the test question asks the student to estimate a measurement, the dimensions of the figure or object are not supplied.

Questions with or without units of measurement are appropriate.
Other questions may ask which of several different strategies gives the best estimate of a quantity.
Questions may ask the student to evaluate the reasonableness of specified results.
Examples for Objective 12:
results

The Math Club at Center High School has filled a five-gallon jar with beans. All the students are asked to guess how many beans are in the jar. A prize will be given to the person whose guess is closest to the actual number of beans in the jar.

Which method best estimates the number of beans in the jar?

1. Count the number of beans around the outside of the jar and then multiply by the number of beans from the top to the bottom of the jar.
2. Count the number of beans in a cup and then multiply by the number of cups in five gallons.
3. Measure the size of a bean and then multiply by the area of the jar.
4. Weigh the jar, weigh a bean, and then multiply by the weight of the bean.

Strategies for Options:

1. confusing surface area with volume
2. *
3. volume needed
4. division needed plus weight of jar

results

Which number rounded to the nearest hundreds would be 600?

1. 496 (1) should be rounded up to 500
2. 538 (2) should be rounded down to 500
3. 649 (3) *
4. 715 (4) should be rounded down to 700

results

462 x 819 =

Which shows the numbers in the problem rounded to the nearest hundreds?

1. 400 x 800 (1) rounded 462 down
2. 500 x 800 (2) *
3. 400 x 900 (3) closest answer but rounded both incorrectly
4. 500 x 900 (4) rounded 819 up
Examples for Objective 12: results

Strategies for Options:

Which girl has run about $\frac{1}{3}$ of the track distance?

(1) Alice  
*(2) Carol  
(3) Judy  
(4) Mary  

(1) too little  
(2) *  
(3) too much  
(4) too much
READING
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING OBJECTIVES

Skill Area: Literal Comprehension
Objective 1: The student distinguishes between fact and opinion in an academic, everyday, or employment context.

Objective 2: The student recognizes explicitly stated main ideas, details, sequence of events, and cause and effect relationships in an academic, everyday, or employment context.

Objective 3: The student interprets instructions in an academic, everyday, or employment context.

Skill Area: Inferential Comprehension
Objective 4: The student recognizes implicitly stated main ideas, details, sequence of events, and cause and effect relationships in an academic, everyday, or employment context.

Objective 5: The student interprets word meanings and patterns of language in an academic, everyday, or employment context.

Objective 6: The student interprets figurative language in an academic or everyday context.

Objective 7: The student recognizes propaganda techniques in an academic, everyday, or employment context.

Skill Area: Problem Solving
Objective 8: The student uses reference sources in an academic, everyday, or employment context.

Objective 9: The student makes generalizations and draws conclusions in an academic, everyday, or employment context.

Objective 10: The student makes predictions and comparisons in an academic, everyday, or employment context.

Objective 11: The student recognizes relevance of data in an academic, everyday, or employment context.
Skill Area: Literal Comprehension

Objective 1: The student distinguishes between fact and opinion in an academic, everyday, or employment context.

Assessment Characteristics:

- distinguishes fact and opinion

A fact is an objective statement which, given the necessary information, can be determined to be accurate or inaccurate. Standards such as measurement systems (e.g., the metric system), sensory data, and definitions are used to verify factual statements.

An opinion is a value-laden statement expressing individual preferences, judgments, or beliefs which may or may not be referred to in a passage.

Subject matter for these questions may, for example, come from textbooks, editorials, news reports, or reviews of books, music, and movies. When a passage is used, the facts and opinions are related to the passage.

The questions do not test whether factual statements are true or false. For example, "Reagan was elected President in 1981" is a false fact and, therefore, would not be used as an option.
Examples for Objective 1:

**opinion**

Which is an OPINION?

(1) LOST: 15-lb. male dog
(2) Black and tan terrier
*(3) Cute and frisky
(4) Call 223-4567

---

Dear Customer:

Thank you for your order. You won't be disappointed. Your order was sent to our purchasing department for processing. They have notified us that we are temporarily out of our hair dryer, model #49620.

Delivery will be in approximately six weeks. Thank you for your patience.

**opinion**

Which is an OPINION?

(1) Thank you for your order.
*(2) You won't be disappointed.
(3) Your order was sent to our purchasing department for processing.
(4) They have notified us that we are temporarily out of our hair dryer, model #49620.

---

**fact**

Which is a FACT?

*(1) Bart: I made twenty dollars mowing lawns Saturday.
(2) Joe: Wow! That's a lot of money.
(3) Bart: Mowing is a hard way to earn twenty dollars.
(4) Joe: I guess so! It was sure hot Saturday, too.

---

Strategies for Options:

(1) can be verified
(2) can be verified
(3) *
(4) can be verified

(1) factual
(2) *
(3) factual
(4) factual

(1) *
(2) opinion
(3) opinion
(4) opinion
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area:   Literal Comprehension

Objective 2: The student recognizes explicitly stated main ideas, details, sequence of events, and cause and effect relationships in an academic, everyday, or employment context.

Assessment Characteristics:

Information for these questions is explicitly (or directly) stated in the passage or other stimulus material; a paraphrase is appropriate at this grade level. The correct response does not require knowledge beyond that provided by test materials; answers are passage dependent.

- recognizes explicit main idea
  The main idea is a major point of the passage. An explicit main idea is directly stated in a single sentence in a passage. Students are expected to recognize paraphrases of this main idea statement.

- recognizes explicit details
  The details in these questions are necessary or relevant to overall passage comprehension. Questions do not focus on trivial information. The information may be paraphrased.

- recognizes explicit sequence of events
  These questions may ask about the sequence of any events that are directly stated in the passage. The sequence is not arbitrary or trivial, e.g., sequence for morning routine. Signal words (e.g., first, next) may or may not be used.

- recognizes explicit cause-effect
  These questions require the student to identify one of the events in the cause-effect relationship or to describe the relationship between two events. These events and the relationship may be in one or two sentences in the passage. Words that directly signal the relationship (e.g., because, so, and) are included.
Examples for Objective 2:

Of the many different kinds of storms, tornadoes are the smallest and most dangerous. Many people confuse tornadoes with hurricanes, but they are very different. A tornado travels about 15 or 20 miles with a path that is usually only about a quarter of a mile wide, while a hurricane may travel thousands of miles and have a path of destruction hundreds of miles wide. Despite its comparatively small size, a tornado is much more powerful and typically does much more damage than a hurricane, blowing cars through buildings and lifting loaded trucks from the highway.

Tornadoes occur every year killing people and destroying property and, therefore, must be monitored. Advance reports warn people about dangerous storms and give them time to make preparations. This job falls to the weather experts who constantly study the weather in the United States and in other parts of the world in order to predict how and when the weather will change. Because tornadoes are so dangerous and destructive, detection of them is a major part of these weather experts' job. These early warnings can reduce the amount of damage and the number of deaths and injuries caused by tornadoes.

explicit main idea

Which is the main idea?

(1) Tornadoes occur every year.
(2) Tornadoes are small, dangerous storms.
(3) Weather experts constantly study the weather.
(4) Advance reports warn people about dangerous storms.

explicit detail

The width of a tornado's path is typically

(1) a quarter of a mile.
(2) 15 or 20 miles.
(3) hundreds of miles.
(4) thousands of miles.

explicit cause-effect

Because tornadoes are more powerful than hurricanes, they

(1) move slower
(2) produce more rain.
(3) cause more damage.
(4) travel shorter distances.
Skill Area: Literal Comprehension

Objective 3: The student interprets instructions in an academic, everyday, or employment context

Assessment Characteristics:

Questions for this objective require the student to recognize which of the four options shows that a set of instructions was completed correctly. The type as well as the sequence or organization of the information is relevant to answering the questions correctly.

- interprets diagrams
- interprets forms
- interprets labels
- interprets lists / prose

Questions may use actual labels, forms, or diagrams. Directions may be presented in narrative form; lists or steps may be used.

Question content may, for example, include transportation schedules, career information, or directions for assembling equipment. Instructions in an academic setting (e.g., how to arrange sections of a term paper) are also appropriate.

"According to the passage" may be used in a question, if necessary, to eliminate interference from prior knowledge.
Examples for Objective 3:

forms

"JUST FOR YOU" ORDER FORM

Name: ____________________________
Address: ____________________________
City: ___________ State: ______
Zip Code: __________
Style #: __________
Size: __________ Initials: ______

Which information correctly completes the form?

(1) Bo Garrison
   118 Center Street
   GA
   31600
   #216
   Large    BG

(2) Bo Garrison
   Mt. Pleasant,
   #216
   GA
   31600
   728-4290

*(3) Bo Garrison
   118 Center Street
   Mt. Pleasant, GA
   31600
   #216
   Large    BG

(4) Bo Garrison
   118 Center Street
   Mt. Pleasant
   31600
   #216
   Large

Strategies for Options:

(1) omitted city

(2) substituted phone number for style;
   omitted size and street address

(3) *

(4) omitted state and initials
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Inferential Comprehension

Objective 4: The student recognizes implicitly stated main ideas, details, sequence of events, and cause and effect relationships in an academic, everyday, or employment context.

Assessment Characteristics:

Questions for this objective require the student to answer questions based on information which is implied in the passage.

Implicit information can be thought of as that information contained "between the lines" of a passage. The correct response should not require knowledge beyond that provided by test materials. While the information is implicit, or not directly stated, the answer is still dependent on clues in the passage.

- recognizes implicit main idea

The main idea is the major point of the passage. It can be inferred from more than one sentence in the passage.

Main idea questions test the student's ability to distinguish a major point of the passage from minor points, details, or inaccurate main idea statements.

- recognizes implicit detail

Detail questions require the student to recognize the appropriate piece of information that answers a question. The passage offers clues, but the answer will not be directly stated.

Information used in questions must be relevant to overall passage comprehension. Trivial information is not emphasized.

- recognizes implicit sequence of events

Sequence of events questions require the student to order a series of events in the passage or identify an event that precedes or follows another event. These events are either not all directly mentioned or not discussed in the passage in the actual order they occurred.

Events selected for question content must test information necessary or relevant to overall passage comprehension; they are not arbitrary lists like a sequence for a morning routine.

These questions may ask about any event in a sequence except the last one. Explicit sequencing terms (e.g. first, next, last) are not used.
• recognizes implicit cause-effect

These questions require students to identify a situation or event in the cause-effect relationship or to describe the relationship between two events, situations, or people. This relationship is based on information that may be found in several sentences in the passage.

For these questions, words that make a relationship explicit (e.g., as a result, and, so) are not used.
Examples for Objective 4:

American Indians in New England were, perhaps, the first in this country to have the chewing gum habit. An extract of the pulp of spruce trees provided them with something to chew to lessen their thirst during long journeys. Colonists, in turn, tried spruce gum but did not like its flavor.

An attempt was made in 1850 to substitute paraffin, a wax-like substance, for spruce gum. It was not successful, though, because paraffin did not have the right texture.

Twenty years later, a New York photographer discovered that chicle, the sap of the Chiclezapote tree, had the right texture. Unknown to him, Mexican Indians had been chewing the substance for centuries.

Most gum today is not made of chicle, but of latex rubber—again the sap of a tree, this time the sapodilla tree found in Central and South America. After the addition of natural or artificial sweeteners and flavoring, it is shaped and packaged. The popularity of chewing gum now extends far beyond the American Indians of New England.

implicit main idea

Which is the main idea?

(1) American Indians used spruce pulp as chewing gum.  
*(2) Chewing gum has been made of many substances over the years.  
(3) South American countries have been primarily responsible for the development of chewing gum.  
(4) Chewing gum is popular all over the world.

implicit detail†

Chewing gum has primarily been made from

(1) New England trees.  
*(2) natural substances.  
(3) wax.  
(4) artificial sweeteners and flavoring.

†When questions ask overlapping information, they could not appear in the same test form
Examples for Objective 4:

implicit sequence of events†

1. Paraffin was a substitute for spruce gum.
2. Mexican Indians chewed the sap of the Chiclezapote tree.
3. Chewing gum was made of latex rubber.
4. A New York photographer discovered that chicle had the right texture for chewing.

Which is the correct order of events?

(1) 2,4,3,1
(2) 4,2,1,3
* (3) 2,1,4,3
(4) 4,1,2,3

†When questions ask overlapping information, they could not appear in the same test form.

implicit cause-effect

Paraffin was tried as a substitute for spruce gum because

(1) spruce gum was hard to obtain.
* (2) the taste of spruce gum was unacceptable.
(3) spruce gum did not lessen thirst.
(4) the texture of spruce gum was unacceptable.

(1) not mentioned in the passage
(2) *
(3) misread sentence
(4) the texture of paraffin was unacceptable.
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Inferential Comprehension

Objective 5: The student interprets word meanings and patterns of language in an academic, everyday, or employment context.

Assessment Characteristics:

Appropriate questions involve either semantic relationships (word meanings) or syntactic relationships (sentence structure or word pattern) in sentences.

- interprets words in context

  Questions require the student to interpret words from context. Passages contain sufficient context clues to help students determine the meaning of the underlined word(s).

  Words with multiple meanings or words considered unfamiliar to this level student may be used to require the student to rely on the context of a paragraph or passage. Obscure word meanings are not used.

- interprets affixes

  Questions require the student to interpret or select prefixes and suffixes when an appropriate example is given or to identify the effect that an affix has on a word.

  Students are not required to know the definition of an affix.

- interprets pronoun referents

  Questions require the student to match pronouns to their referents in the context of a paragraph or passage.

- interprets equivalent sentences

  Questions require the student to interpret punctuation in order to select a sentence or set of sentences which is equivalent to a given statement.

  Other questions require students to match two or more sentences with a paraphrased sentence or sentences.

- interprets syntax

  Questions require students to select a syntactically appropriate form of a word to complete a sentence.
## Examples for Objective 5:

### words in context

Marti was **piqued** by her brother's behavior. He refused to help her do the yard work.

**Piqued** means

* (1) angered.

(2) calmed.

(3) pleased.

(4) interested.

**Strategies for Options:**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) *</td>
<td>(2) syntactically appropriate, but not correct meaning.</td>
<td>(3) syntactically appropriate, but not correct meaning.</td>
</tr>
</tbody>
</table>

### affixes

In which word does **dis** mean **not**?

* (1) dishonest

(2) dishpan

(3) dismal

(4) distress

**Strategies for Options:**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) *</td>
<td>(2) begins with <strong>dis</strong>, but does not mean <strong>not</strong></td>
<td>(3) begins with <strong>dis</strong>, but does not mean <strong>not</strong></td>
</tr>
</tbody>
</table>

### pronoun referents

Martin invited three friends to a movie. He asked Manuel, Bobby and Nathan. They all agreed to go. Nathan said his mom would take them if Martin's mom could pick them up.

**His** refers to

(1) Bobby.

(2) Manuel.

(3) Martin.

* (4) Nathan.

**Strategies for Options:**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) mentioned in paragraph</td>
<td>(2) mentioned in paragraph</td>
<td>(3) mentioned in paragraph</td>
</tr>
</tbody>
</table>
Examples for Objective 5:

**Equivalent Sentences**

Molly studied hard. Molly wanted to pass her test.

Which means the same as the two sentences?

1. Molly wanted to study.
2. Molly studied hard and wanted to pass the test.
3. Molly passed the test although she didn't study.
4. Molly wanted to pass the test even though she studied hard.

---

**Equivalent Sentences**

Many students get government loans. The loans help pay their college tuition.

Which means the same as the two sentences?

1. To help pay their tuition, many college students use government loans.
2. Many students get government loans after they go to college.
3. Many colleges help students pay for government loans.
4. Government loans come from tuition that students pay.

---

**Syntax**

In the park there are five

1. bench.
2. benched.
3. benches.
4. benching.

---

Strategies for Options:

1. Misinterpretation of “studies hard” and “wanted to pass”
2. *
3. Incorrect causal relationship
4. Incorrect relationship between the two sentences

---

1. Alternate form of “benches”
2. Alternate form of “benches”
3. *
4. Alternate form of “benches”
Examples for Objective 5:

syntax

Richard _______ the bicycle before buying it.

* (1) examine
(2) examined
(3) examiner
(4) examining

Strategies for Options:

(1) alternate form of “examined”
(2) *
(3) alternate form of “examined”
(4) alternate form of “examined”
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Inferential Comprehension

Objective 6: The student interprets figurative language in an academic or everyday context.

Assessment Characteristics:

- interprets figurative language

Questions require the student to select the non-literal meaning of a phrase (i.e., phrases where meaning cannot be derived from the literal definition of the individual words such as "raining cats and dogs"). The phrase is always given in a context (poetry, sentences, or a passage).

Examples of figures of speech that may be used are:

--metaphors, when comparisons are implied ("the curtain of night");
--similes, when one thing is likened to another ("Her tears fell like rain"); and
--hyperboles or exaggerations ("His suitcase weighed as much as the airplane").

Idioms (e.g., "take a walk"), slang, cliches (e.g., "strong as an ox"), and trite expressions are not used at this level.
Examples for Objective 6:

figurative language

The Georgia coast reaches out
to touch the mother sea,
The Georgia border
to meet her sister states.

In the poem, Georgia is treated as if it were a
(1) nearby state.
(2) body of water.
(3) school of fish.
*(4) member of a family.

figurative language

The lake was calm. The sun reflected off its
surface as though it were a newly polished
mirror.

The underlined phrase means the lake was
(1) clean.
(2) oval.
(3) wet.
*(4) smooth.

Strategies for Options:

(1) "nearby" plausible based on
"reaching out to touch"
(2) reference to coast
(3) reference to sea
(4) *

(1) reference to "polished"
(2) shape of a mirror
(3) water is wet
(4) *
Skill Area: Inferential Comprehension

Objective 7: The student recognizes propaganda techniques in an academic, everyday, or employment context.

Assessment Characteristics:

- recognizes propaganda techniques

Questions require the student to recognize an underlying intent to persuade or the reasoning used in the argument.

Various propaganda techniques may be used such as: testimonials of "famous" people; ambiguous statements such as "the students agreed"; bandwagon where everyone is using/doing something; card stacking where only positive information is presented; authoritative opinion like "Doctors say....".

Questions do not ask students to identify which type of propaganda technique is used.

Appropriate contexts include advertisements as well as typical interpersonal situations in which one person tries to persuade another.
Examples for Objective 7:

Use GLOW -- the toothpaste that makes teeth sparkle! GLOW brightens smiles and freshens breath. GLOW contains fluoride to prevent cavities. Buy GLOW today!

propaganda techniques

The main purpose of the advertisement is to

*(1) sell GLOW toothpaste.
(2) make people smile more often.
(3) encourage good dental health.
(4) compare GLOW to another toothpaste.

Cecil had asked Marsha to go to the county fair with him. Marsha wasn’t sure her parents would let her go to the fair. She thought about how she would ask them. When she finally talked to them, she said the fair was really very close to home. She said that lots of her friends from school would be there and that Cecil would be sure she got home all right.

propaganda techniques

Marsha wanted to convince her parents that a trip to the fair was

(1) crowded.
(2) exciting.
*(3) safe.
(4) short.

Strategies for Options:

*(1) true, but not reason given
(2) true, but not reason given
*(3) true, but not reason given
(4) reference to nearby
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Problem Solving

Objective 8: The student uses reference sources in an academic, everyday, or employment context.

Assessment Characteristics:

Questions require the use of cross-reference techniques such as those used in telephone books (e.g., "doctor" listed as "See physician"); multiple-step search strategies (e.g., Jan called 3 government agencies and still didn't have the question answered. Where could she check next?); and recognizing various classification schemes such as those used in libraries.

Questions may focus on why one source is more appropriate than another for a specific need.

Students are expected to have knowledge of and experience with these materials.

- uses library reference materials
  Questions require students to locate information for a specific task, including which source to use as well as how to use it.
  Questions include knowledge about using card catalogues. Appropriate reference materials might include atlases, almanacs, and encyclopedias.

- uses dictionary
  Questions include recognizing the purpose of a dictionary or thesaurus as well as how to use them for selecting appropriate meanings of words, finding synonyms or antonyms, etc.

- uses index/appendix
  Questions require students to understand the purpose of an index or appendix as well as how to use them.

- uses table of contents
  Questions require students to use tables of contents to locate information.

- uses telephone book
  Questions require students to be familiar with using both the white and yellow page sections of a telephone book.

- uses other reference materials
  Questions emphasize the use of non-academic reference sources such as classified ads, recipes, instruction manuals, and public information documents.
  A person (e.g., a police officer) may also be considered an appropriate source of information.
Examples for Objective 8:
library reference materials

---

Ju
799.1
Bas Bass, John
A Guide to Fishing
New York: Forest-Alcott [c1979]
174p Illus.

Which information would be most useful in order to find this book on a library shelf?

*(1) Ju
799.1
Bas

(2) Ju.
c1979

(3) 174p

(4) 799.1
Fishing

Strategies for Options:

(1) *

(2) date not necessary

(3) number of pages unnecessary

(4) topic not necessary
Examples for Objective 8:

**muffle**(*'muf-l*), n. 1. Anything that deadens a sound. 2. An oven used for hardening or drying pottery; a kiln. -v. muffled, muffling. 3. To wrap for warmth. 4. To wrap for the purpose of deadening sound.

**murmur**(*'mur-mur*), n. 1. A whispered sound. 2. A soft mutter. -v. murmured, murmuring. 3. To mutter. 4. To complain in low tones. 5. To make low sounds.

**muster**(*'mus-ter*), n. 1. A gathering of troops. 2. The official roll for a military unit. -v. mustered, mustering. 3. To bring together troops. 4. To enlist.

**muzzle**(*'muz-l*), n. 1. The jaws and nose of an animal. 2. A fastening or covering for the mouth of an animal to prevent biting. -v. muzzled, muzzling. 3. To bind shut the mouth of an animal to prevent from biting. 4. To keep someone from speaking freely.

**mystify**(*'mis-ta-fi*), v.t., 1. to cause bewilderment in. 2. to involve in mystery or obscurity.

**dictionary**

Which word means to speak in a low voice?

(1) muffle  (1) other dictionary choice
*(2) murmure  (2) *
(3) muster  (3) other dictionary choice
(4) mystify  (4) other dictionary choice

dictionary

The dog’s muzzle was used when his master took him into a large crowd of people.

Which meaning of the word muzzle fits the sentence?

(1) 1  (1) other meaning
*(2) 2  (2) *
(3) 3  (3) other verb meaning
(4) 4  (4) other verb meaning
Examples for Objective 8:

index

<table>
<thead>
<tr>
<th>Oxygen, 11</th>
<th>importance to plants, 15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>importance in breathing, 15</td>
</tr>
<tr>
<td>Pesticides, 23, 65</td>
<td></td>
</tr>
<tr>
<td>Plants</td>
<td></td>
</tr>
<tr>
<td>crop damage, 51, 52, 53, 54, 55</td>
<td></td>
</tr>
<tr>
<td>forests, 10, 46-49, 51</td>
<td></td>
</tr>
<tr>
<td>importance of oxygen, 15</td>
<td></td>
</tr>
<tr>
<td>Pollution</td>
<td></td>
</tr>
<tr>
<td>control of, 83</td>
<td></td>
</tr>
<tr>
<td>sources of, 82</td>
<td></td>
</tr>
<tr>
<td>tests to measure, 85</td>
<td></td>
</tr>
<tr>
<td>Smoke, 36, 37, 39</td>
<td></td>
</tr>
<tr>
<td>Smoking, 46-47, 48, 60</td>
<td></td>
</tr>
<tr>
<td>Sunlight, 25, 31</td>
<td></td>
</tr>
</tbody>
</table>

Josh does not know how pollution in the atmosphere is measured. To which page should he refer?

(1) 11
(2) 25
(3) 83
(4) 85

(1) oxygen in atmosphere, but too general
(2) sunlight, related to atmosphere
(3) pollution control--related topic
(4) *

other reference materials

English Shopping Center

<table>
<thead>
<tr>
<th>Basket Shoppe</th>
<th>LL 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferns &amp; Flowers</td>
<td>LL 3</td>
</tr>
<tr>
<td>Games-to-Go</td>
<td>UL 1</td>
</tr>
<tr>
<td>Glenn's Subs &amp; Soups</td>
<td>UL 3</td>
</tr>
<tr>
<td>Hannaford's Store</td>
<td>LL 1</td>
</tr>
<tr>
<td>Sportswear Unlimited</td>
<td>UL 2</td>
</tr>
<tr>
<td>Weight Clinic</td>
<td>LL 2</td>
</tr>
</tbody>
</table>

At which location would someone most likely be able to buy lunch?

(1) LL4
(2) UL1
(3) UL3
(4) LL2

(1) reference to basket of food, e.g., burger basket
(2) equates Games-to-Go with takeout lunch
(3) *
(4) weight relates to eating
Skill Area: Problem Solving

Objective 9: The student makes generalizations and draws conclusions in an academic, everyday, or employment context.

Assessment Characteristics:

- makes generalizations

  These questions require the student to use information from the passage to either formulate a generalization or to apply a generalization to another situation. To generalize means to infer a principle or general statement from particular facts given in the paragraph.

  A generalization can be applied to other situations, points in time, people, or events beyond those described in the passage.

- draws conclusions

  These questions require the student to recognize an appropriate ending, outcome, or final decision based on multiple pieces of information presented in the passage.

  A conclusion brings closure to a passage and is specific to the information or situation in the passage.
Examples for Objective 9:

When John applied for a part time job, the employer, Mr. Bates, examined John’s school records. He noticed that John had been late as much as three days a week. John’s last employment reference indicated that he had some trouble arriving at work on time. Mr. Bates did not hire John.

generalizations

Which did Mr. Bates decide about John?

(1) John could work only three days a week.
(2) John had been late for school but will get to work on time.
(3) John was not worried about getting a job.
* (4) Being on time was not important to John.

Strategies for Options:

(1) reference to late 3 days
(2) contradicts evidence from last job
(3) no evidence to support this statement
(4) *

The land of Mingo is surrounded by an ocean. Because of the ice and snow, the growing season is too short for growing anything except for what families need for themselves. The people must make their living in other ways. Mingo’s ocean provides good fishing most of the year. The inhabitants of this land have become good sailors because they spend so much time on the water.

conclusions

Which industry would most likely be attracted to Mingo?

(1) farming
(2) vacation resorts
* (3) seafood packing
(4) water processing plant

(1) reference to limited growing season
(2) no basis, faulty conclusion that island countries make good resorts
(3) *
(4) no basis, but water is plentiful
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Problem Solving

Objective 10: The student makes predictions and comparisons in an academic, everyday, or employment context.

Assessment Characteristics:

- makes predictions
  
  Prediction questions require the student to identify the next most likely event based on other events or clues in a passage. The event should be a plausible occurrence.

- makes comparisons
  
  These questions require the student to answer questions based on a comparison or to identify the dimension(s) for which a comparison is made.

  Comparisons or contrasts may be made between characteristics of events, people, or situations.

  If a question requires identifying the basis for comparison (e.g., time, expense), this dimension will not be stated directly in the passage.
Examples for Objective 10

Paula's family was preparing for a day trip to the beach. They wanted to spend the day outdoors enjoying the sunshine. Because the beach was two hours away, everyone was up early. While the rafts, towels, and food were being packed in the car, storm clouds gathered on the horizon. Soon everyone heard a roll of thunder. Large raindrops began to fall.

Predictions

Which will Paula's family most likely do next?

1. pack rain umbrellas
2. picnic in the back yard instead
3. go to the beach in the rain anyway
4. check a weather report for the beach

Of the many different kinds of storms, tornadoes are the smallest and most dangerous. Many people confuse tornadoes with hurricanes, but they are very different. A tornado travels about 15 or 20 miles with a path that is usually only about a quarter of a mile wide, while a hurricane may travel thousands of miles and have a path of destruction hundreds of miles wide. Despite its comparatively small size, a tornado is much more powerful and typically does much more damage than a hurricane, blowing cars through buildings and lifting loaded trucks from the highway.

Tornadoes occur every year killing people and destroying property and, therefore, must be monitored. Advance reports warn people about dangerous storms and give them time to make preparations. This job falls to the weather experts who constantly study the weather in the United States and in other parts of the world in order to predict how and when the weather will change. Because tornadoes are so dangerous and destructive, detection of them is a major part of these weather experts’ job. These early warnings can reduce the amount of damage and the number of deaths and injuries caused by tornadoes.

Comparisons

How are tornadoes and hurricanes different?

1. Hurricanes are more dangerous than tornadoes.
2. Tornadoes travel a shorter distance than hurricanes.
3. Hurricanes occur more often than tornadoes.
4. Weather reporters track hurricanes better than tornadoes.

Strategies for Options:

1. logical, if it’s raining
2. if it’s raining, why picnic at all
3. not logical
4. *

This passage was used in Objective 2. Passages often have questions from more than one objective.
EIGHTH GRADE CRITERION-REFERENCED TESTS
READING TEST CONTENT

Skill Area: Problem Solving

Objective 11: The student recognizes relevance of data in an academic, everyday, or employment context.

Assessment Characteristics:

Relevance of data questions require the student to select relevant or irrelevant information for a specific problem.

- recognizes relevance of data

The student may be asked to identify what additional information is necessary to solve the problem or what criteria were used for solving a problem.

If the question requires some interpretation of the importance of data, the criterion for making a decision is specified.
Examples for Objective 11:

**Strategies for Options:**

- **GRANVILLE SCHOOL CARNIVAL**
  - CRAFTS & GAMES
  - BOOK SWAP
  - DUNKING BOOTH
  - DART THROW
  - CAKE WALK
  - HOMEMADE GOODIES
  - AND MUCH, MUCH MORE

  **SCHOOL GYMNASIUM**
  - **FRIDAY 6:00 - 12:00**
  - **SATURDAY 9:00 - 1:00**

relevance of data

What important information is missing for a person who wants to attend the carnival?

1. which friends are going
2. who will be dunked
3. who made the goodies
4. what are the dates

(1) missing, but not related to decision
(2) missing, but not related to decision
(3) missing, but not related to decision
(4) *
Federal law prohibits discrimination on the basis of race, color or national origin (Title VI of the Civil Rights Act of 1964); sex (Title IX of the Educational Amendments of 1972 and Title II of the Carl D. Perkins Vocational Education Act of 1984); or handicap (Section 504 of the Rehabilitation Act of 1973) in education programs or activities receiving federal financial assistance.

Employees, students and the general public are hereby notified that the Georgia Department of Education does not discriminate in any educational programs or activities or in employment policies.

The following individuals have been designated as the employees responsible for coordinating the department's effort to implement this nondiscriminatory policy.

- Title II — Ann Lary, Vocational Equity Coordinator
- Title VI — Josephine Martin, Associate State Superintendent of Schools
- Title IX — Ishmael Childs, Coordinator
- Section 504 — Jim Whitworth, Coordinator

Inquiries concerning the application of Title II, Title VI, Title IX or Section 504 to the policies and practices of the department may be addressed to the persons listed above at the Georgia Department of Education, Twin Towers East, Atlanta 30334; to the Regional Office for Civil Rights, Atlanta 30323; or to the Director, Office for Civil Rights, Education Department, Washington, D.C. 20201.