# Contents

## Introduction

- Ensure That the Same Test Form Is Used ........................................... 2
- Ensure Test Security ................................................................. 3
- Grouping Students for a Test Administration ................................. 3
- Test Administration ............................................................... 4
- Oral Administration Code on Answer Document ............................... 5
- Guidelines for Reading Aloud Various Types of Test Questions ............ 5

## Guidelines for Mathematics

- Abbreviations ................................................................. 6
- Algebraic Expressions/Equations .................................................. 6
- Other Equations ............................................................... 6
- Geometric Symbols ............................................................. 7
- Graphics ........................................................................... 7
  - Bar Graphs ................................................................ 7
  - Clock Faces ................................................................. 7
  - Coordinate Grids/Graphs ...................................................... 8
  - Diagrams ..................................................................... 8
  - Money ........................................................................ 8
  - Number Lines ............................................................... 9
  - Pictographs ................................................................ 9
  - Number Lists ................................................................ 9
  - Numerical Expressions ....................................................... 9
  - Dashes .......................................................................... 10
  - Dates .......................................................................... 10
  - Decimals .................................................................... 10
  - Exponents .................................................................. 10
  - Fractions .................................................................... 10
  - Functional Notation ......................................................... 10
  - Money ........................................................................ 11
  - Ordered Pairs ................................................................ 11
Parentheses and Brackets .............................................. 11
Ratios ........................................................................ 11
Roman Numerals .......................................................... 11
Set Notation and Interval Notation ................................. 11
Subscripts .................................................................... 12
Symbols ....................................................................... 12

Guidelines for Reading and Writing

Abbreviations ................................................................. 13
Numbers ......................................................................... 13
Direction Lines ............................................................... 14
Graphics ........................................................................ 14
Diagrams ....................................................................... 14
Story Maps .................................................................... 14
Verbatim Text ................................................................. 15

Guidelines for Science

Abbreviations ................................................................. 16
Equations and Scientific Expressions ............................... 16
  Capital and Lowercase Letters .................................... 16
  Chemical Elements and Compounds ............................ 16
  Chemical Equations ................................................... 17
  Scientific Names ......................................................... 17
Graphics ........................................................................ 17
  Bar Graphs ................................................................. 17
  Circle Graphs ............................................................. 17
  Codon Charts ............................................................. 18
  Coordinate Grids/Graphs .............................................. 18
  Diagrams ..................................................................... 18
  Maps ........................................................................... 19
  Photographs With Labels ............................................ 19
  Tables .......................................................................... 19
Numerical Expressions .................................................. 19
Dashes .......................................................................... 19
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates</td>
<td>20</td>
</tr>
<tr>
<td>Decimals</td>
<td>20</td>
</tr>
<tr>
<td>Degrees</td>
<td>20</td>
</tr>
<tr>
<td>Exponents</td>
<td>20</td>
</tr>
<tr>
<td>Percents</td>
<td>20</td>
</tr>
<tr>
<td>Roman Numerals</td>
<td>20</td>
</tr>
</tbody>
</table>

**Guidelines for Social Studies**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviations</td>
<td>21</td>
</tr>
<tr>
<td>Dates</td>
<td>21</td>
</tr>
<tr>
<td>Decimals</td>
<td>21</td>
</tr>
<tr>
<td>Graphics</td>
<td>22</td>
</tr>
<tr>
<td>Bar Graphs</td>
<td>22</td>
</tr>
<tr>
<td>Cause/Effect</td>
<td>22</td>
</tr>
<tr>
<td>Circle Graphs</td>
<td>22</td>
</tr>
<tr>
<td>Diagrams</td>
<td>22</td>
</tr>
<tr>
<td>Maps</td>
<td>23</td>
</tr>
<tr>
<td>Photographs, Political Cartoons, and Other Illustrations</td>
<td>24</td>
</tr>
<tr>
<td>Tables</td>
<td>24</td>
</tr>
<tr>
<td>Time Lines</td>
<td>25</td>
</tr>
<tr>
<td>Percents</td>
<td>25</td>
</tr>
<tr>
<td>Roman Numerals</td>
<td>25</td>
</tr>
<tr>
<td>Text Boxes</td>
<td>25</td>
</tr>
</tbody>
</table>

**Examples**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>26</td>
</tr>
<tr>
<td>Reading</td>
<td>28</td>
</tr>
<tr>
<td>Science</td>
<td>29</td>
</tr>
<tr>
<td>Social Studies</td>
<td>30</td>
</tr>
</tbody>
</table>
Introduction

For the State of Texas Assessments of Academic Readiness (STAAR®) program, every test administrator reading aloud secure test content must be trained on the guidelines in this document so that various types of test questions and answers are read aloud in a standardized manner.

This document specifically addresses the administration of assessments to students who meet the eligibility requirements for an oral/signed administration. Additionally, information in this document also applies to the following administrations.

- STAAR with Embedded Supports
  - The test administrator may provide reading support to a student receiving a paper administration.
  - The test administrator may provide a signed administration of the test for deaf and hard-of-hearing students who cannot access the text-to-speech function.
  - The test administrator may read required reference materials and allowable accommodations for all students.

The campus coordinator will provide training in the procedures specific to orally administering test content as outlined in these guidelines. When applicable, the following documents should also be reviewed.

- The Oral/Signed Administration policy document
- The paper administration guides for STAAR with Embedded Supports
- The General Instructions for Administering State Assessments to Students Who are Deaf or Hard of Hearing
Ensure That the Same Test Form Is Used

- When orally administering all test questions and answer choices throughout a paper assessment where there is more than one test form available, the test administrator must have a test booklet with the same form number as the students. Campus coordinators are responsible for distributing test booklets with the same form number.
  - For STAAR and STAAR Spanish, form 01 is the overage in all shipments. This should be the form that is used for oral administration groupings.
  - For paper versions of STAAR with Embedded Supports and STAAR Spanish with Embedded Supports, there is only one form. Therefore, the test administrator and the students should automatically have the same form.

- When orally administering parts of test questions or answer choices at a student’s request on a paper assessment for administrations where there are more than one test form available, it is acceptable to read over the student’s shoulder. However, if the test administrator reads out of a separate test booklet, the test administrator MUST have a test booklet with the same form number as the student.

- When orally administering a braille assessment, the test administrator should use the ink-print test booklet that is included with the shipment of braille materials. Test administrators must also refer to the specific braille instructions provided in the braille materials. The specific braille instructions provide information about how a particular braille assessment differs from the print version, including information about test questions that have been altered, replaced, or omitted to ensure that the assessment is accessible to students who read braille. More information can be found in the General Instructions for Administering Braille State Assessments document located on the TEA’s Accommodation Resources webpage.
Ensure Test Security

- All security measures outlined in the STAAR Test Administrator Manuals must be followed.
- Any type of oral administration in which the test administrator has to view a secure state assessment requires that the test administrator sign the appropriate test security oath.
- Responding to test questions, making notes about test questions, and discussing the content of the assessment at any time are prohibited. In addition, test administrators may not write notes or calculations in a test booklet.
- Test administrators must not rephrase, clarify, or interpret any test content.
- Unauthorized verbal and nonverbal assistance may not be provided to students.

Grouping Students for a Test Administration

- An assessment may be orally administered to a small group provided that every student in the small group is eligible for an oral administration. It is the responsibility of district and campus personnel to determine the most appropriate way to group students in order to provide a proper test administration.
- Test administrators must be made aware of the reading needs of the student as well as any requirements that are documented in the student’s paperwork. This includes, if applicable to the oral administration, understanding the level of the student’s reading support and whether that level of reading support can change during testing, based on the documentation in the student’s paperwork. This type of information may help the coordinator determine the most appropriate way to group students in order to provide a proper test administration.
- When reading aloud test content, the test administrator may wait to read aloud the next question and answer choices until all students are ready. Test administrators may also walk around the room and quietly read aloud the questions and answer choices to students at their own pace.
- A student who receives an oral administration may complete the assessment in a separate setting to eliminate distractions to other students and to ensure confidentiality of the test.
Test Administration

- Depending on the content area, test administrators may read aloud all or only certain parts of a state assessment.
  - Mathematics, science, and social studies: The entire mathematics, science, and social studies assessments may be read aloud to a student.
  - Reading: For reading assessments (including the reading section of English I, English II, and English III), only the questions and answer choices may be read aloud. The reading selections may NEVER be read aloud to a student.
  - Writing: No part of the editing selections, test questions, and answer choices in a writing assessment (including the writing section of English I, English II, and English III) may be read aloud unless otherwise specified by TEA. However, the revising selections, questions, and answer choices may be read aloud to a student on a writing test (including the writing section of English I, English II, and English III). Additionally, reading aloud the expository or persuasive writing prompt is an accessibility feature allowable for any student who requests this assistance.

- Test administrators may read aloud supplementary materials.
  - Required reference materials may be read aloud to students eligible for an oral administration. This includes the dictionary during reading and writing assessments, as well as the state-supplied mathematics and science reference materials.
  - Allowable designated supports may be read aloud to students eligible for an oral administration (including any supplemental aids).

- It is important to understand what constitutes a test question. A test administrator must understand that any part of the test question may be read aloud. This applies to words in the questions and the answer choices, including words in graphics (e.g., table, graph, grid, diagram, map, photograph, cartoon, or picture) and boxed text pulled directly from a selection. Specific information regarding how a test question should be read aloud can be found in the following pages.

- If a student needs all of the test questions read aloud, the test questions must be read aloud in the order they are presented. For reading assessments, the student must independently read the selection first, and then the test administrator may read aloud each test question in the order presented. If a student is working through the assessment independently, requesting only certain words, phrases, or sentences to be read at various times, the test administrator will read aloud what the student requests when he or she requests it. No particular order must be followed.

- Test administrators may read aloud any word, phrase, or sentence in the test questions and answer choices as many times as needed. At the end of the assessment, the test administrator may go back to reread a question and its answer choices at a student’s request.

- Test administrators must be familiar with content-specific terms and symbols associated with the subject-area assessment. This will ensure that the assessment is administered accurately.
Test administrators must keep their voice inflection neutral; however, individual words that are boldfaced or printed entirely in capital letters must be emphasized. Words that are italicized must be emphasized unless the text is taken verbatim from a reading or writing selection (e.g., quotation, caption, stage directions).

**Oral Administration Code on Answer Document**

After testing, OA must be recorded in the ACCOMM. field as available on the student's answer document.

**Guidelines for Reading Aloud Various Types of Test Questions**

The guidelines and examples in this document reflect content tested on a STAAR assessment from various grade levels and subject areas. Not every type of test question is addressed. Test administrators are allowed to generalize from these guidelines and examples when reading aloud other types of test questions.

Additional guidelines for signing test content to a student who is deaf or hard of hearing are provided in the General Instructions for Administering State Assessments to Students Who are Deaf or Hard of Hearing document.
Guidelines for Mathematics

Abbreviations

■ Most abbreviations may be read aloud as the word or words they represent. These may be read aloud in either singular or plural form, as appropriate.

Examples:
- *Fri.* may be read aloud as “Friday.”
- *0.5 cm* may be read aloud as “zero point five centimeter.”

■ Initialisms and acronyms may be read aloud as letters or words according to customary usage. Supplying the words represented by the letters is **NOT** allowed.

Examples:
- *SAS postulate* may be read aloud as “S-A-S postulate.”
- *2:00 P.M.* may be read aloud as “two P-M.”
- *NASA* may be read aloud as “nasa.”

Algebraic Expressions/Equations

■ The variables in algebraic expressions/equations in test questions, answer choices, or the reference materials may be read aloud as the letter, not as the word, it represents. In addition, the mathematical operation may be read aloud if the symbol is present.

Examples:
- *\( V = \pi r^2 h \)* may be read aloud as “\( V \) equals pi \( r \) squared \( h \).”
- *\( c \cdot d = k \)* may be read aloud as “\( c \) times \( d \) equals \( k \).”

Other Equations

■ Many equations may be read aloud in the same way as they are read aloud in the classroom.

Example:
- *\( 3 + 17 = 20 \)* may be read aloud as “three plus seventeen equals twenty.”
- *\( m\angle ABC = m\angle CBD \)* may be read aloud as “the measure of angle A-B-C equals the measure of angle C-B-D.”

Exceptions to this guideline exist when reading the equation could aid the student in finding the correct answer (e.g., in an arithmetic sequence).

Example:
- *\( x = 1, 2, 3, \ldots \)* may be read aloud as “\( x \) equals the values shown.”
**Geometric Symbols**

- Geometric symbols may be read aloud in the same way as they are read aloud in the classroom.

  Examples:
  
  \[ \Delta D’E’F’ \] may be read aloud as “triangle D-prime-E-prime-F-prime.”
  \[ m\angle L M N \] may be read aloud as “the measure of angle L-M-N.”
  \[ \overline{A B C} \] may be read aloud as “arc A-B-C.”
  \[ \overline{A B} \] may be read aloud as “line segment A-B.”
  \[ \pi^2 \] may be read aloud as “pi r squared.”

**Graphics**

- Most words and numbers in graphics may be read aloud. However, interpreting the graphic is **NOT** allowed.

**Bar Graphs**

![Bar Graph](image)

**Clock Faces**

![Clock Faces](image)
Graphics (continued)

Coordinate Grids/Graphs

Point, line, and axis labels may be read aloud.

Numbers on axis lines are NOT read.

Diagrams

Labels, numbers, and boxed text may be read aloud.

Money

Words and numbers on images of money may NOT be read aloud.

Guidelines for Mathematics
Graphics (continued)

Number Lines

![Number Line Diagram]

Pictographs

Matter Being Tested

<table>
<thead>
<tr>
<th>Type</th>
<th>Pictograph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>![Pictograph]</td>
</tr>
<tr>
<td>Solid</td>
<td>![Pictograph]</td>
</tr>
<tr>
<td>Gas</td>
<td>![Pictograph]</td>
</tr>
</tbody>
</table>

Each represents 5 samples.

Number Lists

- Most number lists within a line of text or within answer choices may be read aloud. Exceptions to this guideline exist when reading the number list could aid the student in finding the correct answer (e.g., ordering numbers). In these cases, the number list may be read aloud as individual digits.

Numerical Expressions

- Most numerical expressions may be read aloud in the same way as they are read aloud in the classroom—as words or phrases rather than as individual digits.

Examples:

- 483 may be read aloud as “four hundred eighty-three.”
- –16 may be read aloud as “negative sixteen.”
- 30 – 16 may be read aloud as “thirty minus sixteen.”
- \( \sqrt{2} \) may be read aloud as “the square root of two.”

Exceptions to this guideline exist when reading the numerical expression could aid the student in finding the correct answer (e.g., identifying place value). In these cases, the numerical expressions may be read aloud as individual digits.

Example:

What is another way to write 268? may be read aloud as “What is another way to write two-six-eight?”
Numerical Expressions (continued)

Dashes

- When a dash appears between two numbers, it may be read aloud as “to” or “through” depending on the context.

Dates

- Numbers appearing in dates may be read aloud as phrases rather than individual digits.
  
  Example:
  
  June 16, 1978 may be read aloud as “June sixteenth nineteen seventy-eight.”

Decimals

- Decimals in numbers may be read aloud as “point.”
  
  Examples:
  
  3.5 m may be read aloud as “three point five meters.”
  0.178 may be read aloud as “zero point one seven eight.”

Exponents

- Exponents to the second or third power may be read aloud as “squared” or “cubed.”
  If the power is greater than 3, the exponent may be read aloud as “to the nth power.”
  
  Examples:
  
  3 m² may be read aloud as “three meters squared.”
  y⁵ may be read aloud as “y to the fifth.”

Fractions

- In general, fractions may be read aloud as “[expression] over [expression].”
  
  Examples:
  
  \( \frac{3}{7} \) may be read aloud as “three over seven.”
  \( \frac{3x - 5}{7} \) may be read aloud as “three x minus five over seven.”
  \( 3 \frac{1}{4} \) may be read aloud as “three and one over four.”

Functional Notation

- When a function symbol such as \( f(\ ) \) appears, it may be read aloud as “f of…”
  
  Examples:
  
  \( f(x) \) may be read aloud as “f of x.”
  \( g(-2) \) may be read aloud as “g of negative two.”
Numerical Expressions (continued)

Money

- Most monetary expressions may be read aloud in terms of the appropriate denominations.
  Examples:
  
  $0.57 may be read aloud as “fifty-seven cents.”
  $2.50 may be read aloud as “two dollars and fifty cents.”

Exceptions to this guideline exist when reading the monetary expression could aid the student in finding the correct answer (e.g., identifying the value of money). In these cases, the monetary expressions may be read aloud as individual digits.

Example:

$14.50 may be read as “one four point five zero dollars.”

Ordered Pairs

- In an ordered pair, the coordinates may be read aloud as individual numbers without the parentheses or comma.

Example:

(-2, 1) may be read aloud as “negative two [pause] one.”

Parentheses and Brackets

- Parentheses and brackets in numerical expressions may NOT be read aloud; however, it would be appropriate to pause for these symbols.

Example:

8 - (3 × 2) may be read aloud as “eight minus [pause] three times two.”

Ratios

- A ratio symbol (:) may be read aloud as “to.”

Examples:

1:2 may be read aloud as “one to two.”
3:5:9 may be read aloud as “three to five to nine.”

Roman Numerals

- Roman numerals may be read aloud as the numbers they represent.

Example:

Quadrant II may be read aloud as “quadrant two.”

Set Notation and Interval Notation

- Set Notation may NOT be read aloud; however, individual numbers and variables within the notation may be read aloud.

Example:

{y | -4 < y < 4} may be read as “y [pause] negative four symbol y symbol four”
Numerical Expressions (continued)

- Interval Notation may NOT be read aloud; however, individual numbers within the notation may be read aloud.
  
  Example:
  
  \((-6, 2)\) and \((-2, 10)\) may be read as “negative six”, “two”, “negative two”, “ten”

Subscripts

- Subscripts used with variables may be read aloud as numbers.
  
  Example:
  
  \(x_1 + x_2\) may be read aloud as “\(x\) one plus \(x\) two.”

Symbols

- Many mathematical symbols may be read aloud as the word or words they commonly represent except in cases where that may aid the student in getting the correct answer. The table shows how some common symbols may be read aloud.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Read aloud as...</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>plus</td>
</tr>
<tr>
<td>−</td>
<td>minus</td>
</tr>
<tr>
<td>×</td>
<td>times</td>
</tr>
<tr>
<td>÷</td>
<td>divided by</td>
</tr>
<tr>
<td>=</td>
<td>equals</td>
</tr>
<tr>
<td>(\sqrt{\cdot})</td>
<td>the square root of</td>
</tr>
<tr>
<td>≃</td>
<td>is similar to</td>
</tr>
<tr>
<td>≈</td>
<td>is approximately equal to</td>
</tr>
<tr>
<td>≅</td>
<td>is congruent to</td>
</tr>
<tr>
<td>°</td>
<td>degree(s)</td>
</tr>
<tr>
<td>%</td>
<td>percent, percentage, or percentile (depending on context)</td>
</tr>
<tr>
<td>∞</td>
<td>infinity</td>
</tr>
<tr>
<td>(</td>
<td></td>
</tr>
<tr>
<td>&lt;</td>
<td>symbol</td>
</tr>
<tr>
<td>&gt;</td>
<td>symbol</td>
</tr>
<tr>
<td>≤</td>
<td>symbol</td>
</tr>
<tr>
<td>≥</td>
<td>symbol</td>
</tr>
</tbody>
</table>
Guidelines for Reading and Writing

It is important to note that reading aloud reading selections is NOT allowed. Also, no part of any editing selection, test question, or answer choice in a writing assessment may be read aloud to a student. The guidelines in this section should be followed when reading aloud expository and persuasive writing prompts and when reading aloud revising selections, test questions and answer choices.

Abbreviations

- Most abbreviations may be read aloud as the word or words they represent. These may be read aloud in either singular or plural form, as appropriate.
  
  Examples:
  
  * Mr. may be read aloud as “Mister.”
  * e.g. may be read aloud as “for example.”
  * adv may be read aloud as “adverb.”

- Initialisms and acronyms may be read aloud as letters or words according to customary usage. Supplying the words represented by the letters is NOT allowed.
  
  Examples:
  
  * U.S. may be read aloud as “U-S.”
  * 2:30 P.M. may be read aloud as “two thirty P-M.”
  * NASA may be read aloud as “nasa.”

Numbers

- Most numbers may be read aloud in the same way as they are read aloud in the classroom.
  
  Examples:
  
  * 35°F may be read aloud as “thirty-five degrees Fahrenheit.”
  * $2.50 may be read aloud as “two dollars and fifty cents.”

- Numbers appearing in dates may be read aloud as phrases rather than individual digits.
  
  Example:
  
  * June 16, 1978 may be read aloud as “June sixteenth nineteen seventy-eight.”

- The numbers in dictionary entries are read as “one,” “two,” etc., with no special emphasis.
Direction Lines

- Although reading selections and editing selections may NOT be read aloud, the direction lines that accompany each reading and editing selection may be read aloud.

  Example:
  
  *Read the selection and choose the best answer to each question* may be read aloud.

Graphics

- Most words and numbers in graphics may be read aloud. However, interpreting the graphic is NOT allowed.

Diagrams

- All words may be read aloud.
- It is NOT allowable to indicate what the arrow symbol represents.

Story Maps

- Heading and other words may be read aloud.

<table>
<thead>
<tr>
<th>Story Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title: &quot;THE NEW ZOO&quot;</td>
</tr>
<tr>
<td>Who: George, Liza, The children's mother</td>
</tr>
<tr>
<td>Where:</td>
</tr>
</tbody>
</table>

Mom comes into Judy’s room. → Judy claims to have mumps. → Mom takes Judy’s temperature.
Questions and answer choices that include text taken verbatim from a reading or revising selection (e.g., quotation, caption, stage directions), may be read aloud in their entirety. Italicized text should be given no special emphasis; however, words in boldface may be read aloud with emphasis.

For revising selections ONLY, text may be read aloud in its entirety, keeping voice inflection neutral throughout the selection. Italicized text should be given no special emphasis; however, words in boldface may be read aloud with emphasis.

Brody grinned because he knew that the team—which he had actually led—had successfully completed its task.

MIKE: [Nods eagerly.] My dad was taking me to Ranger Scouts last night, and the traffic was bad.

[Carl gives him an annoyed look.]
Guidelines for Science

Abbreviations

- Most abbreviations may be read aloud as the word or words they represent. These may be read aloud in either singular or plural form, as appropriate.
  
  Examples:
  
  * Dec. may be read aloud as “December.”
  * MHz may be read aloud as “megahertz.”
  * 5°C may be read aloud as “five degrees Celsius.”
  * g/cm² may be read aloud as “grams per centimeters cubed.”

- Initialisms and acronyms may be read aloud as letters or words according to customary usage. Supplying the words represented by the letters is NOT allowed.

  Examples:
  
  * U.S. may be read aloud as “U-S.”
  * AIDS may be read aloud as “aids.”

Equations and Scientific Expressions

- Most equations, formulas, and scientific expressions may be read aloud in the same way as they are read aloud in the classroom.

Capital and Lowercase Letters

- Capital and lowercase letters in chemical formulas should be read aloud without distinction.

  Example:
  
  * HCl may be read aloud as “H-C-L.”

- Capital and lowercase letters in genotypes should be read aloud with distinction as shown.

  Example:
  
  * genotype Rr may be read aloud as “genotype big-R little-r.”

Chemical Elements and Compounds

- Symbols for elements and formulas for compounds may be read aloud as letters and numbers without distinctions or breaks. They may NOT be read aloud as the names of the elements or compounds.

  Examples:
  
  * Ag may be read aloud as “A-G.”
  * C₆H₁₂O₆ may be read aloud as “C-six-H-twelve-O-six.”
Equations and Scientific Expressions (continued)

**Chemical Equations**

- Chemical equations may be read aloud as letters and numbers. Phase indicators such as \((aq)\) may be read aloud as letters. The plus symbol may be read aloud as “plus.” The arrow symbol may be read aloud as “symbol.”

  Example:

  \[\text{Al}_2(\text{SO}_4)_3(aq) + 3\text{Ca(OH)}_2(aq) \rightarrow 3\text{CaSO}_4(s) + 2\text{Al(OH)}_3(s)\]

  may be read aloud as “A-L-two-S-O-four-three-A-Q-plus-three-C-A-O-H-two-A-Q-symbol-

**Scientific Names**

- Scientific (genus/species) names may be read aloud exactly as written.

  Examples:

  *Salmonella enterica* may be read aloud as “Salmonella enterica.”

  *S. enterica* may be read aloud as “S-enterica.”

**Graphics**

- Most words and numbers in graphics may be read aloud. However, interpreting the graphic is **NOT** allowed.

  **Bar Graphs**

  ![Bar Graph Example]

  **Circle Graphs**

  ![Circle Graph Example]


**Graphics (continued)**

**Codon Charts**

<table>
<thead>
<tr>
<th>First Letter</th>
<th>Second Letter</th>
<th>Third Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>C</td>
<td>A</td>
</tr>
<tr>
<td>Phenylalanine</td>
<td>Serine</td>
<td>Tyrosine</td>
</tr>
<tr>
<td>Leucine</td>
<td>Serine</td>
<td>(STOP)</td>
</tr>
<tr>
<td>Leucine</td>
<td>Proline</td>
<td>Histidine</td>
</tr>
<tr>
<td>Leucine</td>
<td>Proline</td>
<td>Histidine</td>
</tr>
<tr>
<td>Leucine</td>
<td>Proline</td>
<td>Glutamine</td>
</tr>
<tr>
<td>Leucine</td>
<td>Valine</td>
<td>Aspartate</td>
</tr>
<tr>
<td>Valine</td>
<td>Valine</td>
<td>Aspartate</td>
</tr>
<tr>
<td>Valine</td>
<td>Valine</td>
<td>Glutamate</td>
</tr>
<tr>
<td>Valine</td>
<td>Valine</td>
<td>Glutamate</td>
</tr>
</tbody>
</table>


**Coordinate Grids/Graphs**

![Coordinate Grids/Graphs](image)

- Letters and words may be read aloud.
- Labels, numbers, and letters may be read aloud.
- Numbers on axis lines are NOT read.
- Abbreviations may be read aloud as the words they represent.
- It is NOT allowable to indicate what the arrow symbol represents.
- All labels may be read aloud.

**Diagrams**

![Diagrams](image)
Graphics (continued)

Maps

Zoogeographic Regions

KEY
- Geographical barriers such as mountains or bodies of water

Photographs With Labels

Title, labels, and numbers may be read aloud.

Words in key may be read aloud.

Labels may be read aloud.

Titles, headings, and numbers may be read aloud.

Abbreviations may be read aloud as the words they represent.

Tables

<table>
<thead>
<tr>
<th>Toy Car</th>
<th>Mass (kg)</th>
<th>Acceleration (m/s²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.19</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>0.15</td>
<td>3.0</td>
</tr>
<tr>
<td>3</td>
<td>0.25</td>
<td>1.5</td>
</tr>
<tr>
<td>4</td>
<td>0.21</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Numerical Expressions

- Numerical expressions may be read aloud in the same way as they are read aloud in the classroom—as words or phrases rather than as individual digits.

Dashes

- When a dash appears between two numbers, it may be read aloud as “to” or “through” depending on the context.
Numerical Expressions (continued)

Dates

- Numbers appearing in dates may be read aloud as phrases rather than individual digits.
  
  Example:
  
  *June 16, 1978 may be read aloud as “June sixteenth nineteen seventy-eight.”*

Decimals

- Decimals in numbers may be read aloud as “point.”
  
  Example:
  
  *3.5 m may be read aloud as “three point five meters.”*

Degrees

- The degree symbol (°) may be read aloud as “degrees,” and numbers with the symbol may be read aloud the same way as they are read aloud in the classroom.
  
  Example:
  
  *35°C may be read aloud as “thirty-five degrees Celsius.”*

Exponents

- Exponents to the second or third power may be read aloud as “squared” or “cubed.” If the power is greater than 3, the exponent may be read aloud as “to the nth power.”
  
  Examples:
  
  *3 m/s² may be read aloud as “three meters per second squared.”
  
  *4.1 × 10⁵ may be read aloud as “four point one times ten to the fifth.”*

Percents

- The percent symbol (%) may be read aloud as “percent,” and numerals with the symbol may be read aloud the same way as they are read aloud in the classroom.
  
  Examples:
  
  *48% may be read aloud as “forty-eight percent.”
  
  *7.5% may be read aloud as “seven point five percent.”
  
  *0.23% may be read aloud as “zero point two three percent.”*

Roman Numerals

- Roman numerals may be read aloud as the numbers they represent.
  
  Example:
  
  *Statements I and II may be read aloud as “statements one and two.”*
Guidelines for Social Studies

Abbreviations

- Most abbreviations may be read aloud as the word or words they represent. These may be read aloud in either singular or plural form, as appropriate.
  
  Examples:
  
  Dr. may be read aloud as “doctor.”
  c. 1450 may be read aloud as “circa fourteen fifty.”
  Marbury v. Madison may be read aloud as “Marbury versus Madison.”

- Initialisms and acronyms may be read aloud as letters or words according to customary usage. Supplying the words represented by the letters is NOT allowed.
  
  Examples:
  
  U.S. may be read aloud “U-S.”
  NAFTA may be read aloud “nafta.”
  NATO may be read aloud “nato.”
  NAACP may be read aloud “N-double A-C-P.”

Dates

- B.C. and A.D., or similar designations that appear in a date, may be read aloud as letters.
  
  Example:
  
  500 B.C. is read as “Five hundred B-C.”

- Numbers appearing in dates may be read aloud as phrases rather than individual digits.
  
  Example:
  
  June 16, 1978 may be read aloud as “June sixteenth nineteen seventy-eight.”

- Dashes appearing between two dates may be read aloud as “to” or “through” depending on the context.
  
  Example:
  
  1960 - 1968 may be read aloud as “nineteen sixty to nineteen sixty-eight” or as “nineteen sixty through nineteen sixty-eight.”

Decimals

- Decimals in numbers may be read aloud as “point.”
  
  Example:
  
  3.5 million people may be read aloud as “three point five million people.”
Graphics

- Most words and numbers in graphics may be read aloud. However, interpreting the graphic is **NOT** allowed.

**Bar Graphs**

Top Greenhouse-Gas Emitters, 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Million Metric Tons Carbon Dioxide Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>6000</td>
</tr>
<tr>
<td>United States</td>
<td>5000</td>
</tr>
<tr>
<td>India</td>
<td>4000</td>
</tr>
<tr>
<td>Russia</td>
<td>3000</td>
</tr>
<tr>
<td>Japan</td>
<td>2000</td>
</tr>
<tr>
<td>Germany</td>
<td>1000</td>
</tr>
</tbody>
</table>

Source: Congressional Research Service

**Cause/Effect**

- **CAUSE**
  - Grant’s troops surround Vicksburg.

- **EFFECT**

**Circle Graphs**

Energy Sources

- Oil (58%)
- Natural Gas (17%)
- Coal (16%)
- Wind (6%)
- Solar (3%)

**Diagrams**

- U.S. annexation of ________
- Border disputes between the United States and Mexico
- U.S.-Mexican War

Guidelines for Social Studies
Graphics (continued)

Maps

Growth Rate of the Population
Age 65 and Older by State, 2000–2005

KEY

- 0 or less
- 0.1% to 5.1%
- 5.2% to 10.2%
- 10.3% or more

United States Average: 5.1%

Source: U.S. Census Bureau and Congressional Research Service

Relocation of American Indians in the 1830s

Letters on compass rose may only be read aloud as letters.

Titles, labels, and numbers may be read aloud.
Graphics (continued)

Photographs, Political Cartoons, and Other Illustrations

Daily News

Atomic Bombs Dropped on Hiroshima and Nagasaki

Tables

1860 Census Results for Selected States

<table>
<thead>
<tr>
<th>State</th>
<th>Total Population</th>
<th>Total Number of Slaves</th>
<th>Slaves as a Percentage of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>964,201</td>
<td>435,080</td>
<td>45%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,057,286</td>
<td>462,198</td>
<td>44%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1,155,084</td>
<td>225,483</td>
<td>20%</td>
</tr>
<tr>
<td>Maryland</td>
<td>687,049</td>
<td>87,189</td>
<td>13%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>791,305</td>
<td>436,631</td>
<td>55%</td>
</tr>
<tr>
<td>Virginia</td>
<td>1,596,318</td>
<td>490,865</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau

Words may be read aloud.

Words and numbers may be read aloud.

Titles, headings, and numbers may be read aloud.
Graphics (continued)

Time Lines

Selected Events in the History of Ford Motor Company

1908 – Ford begins manufacturing the Model T.
1913 – Ford introduces the first moving automobile assembly line.
1914 – The Ford Motor Company doubles worker pay to $5.00 a day and cuts the length of a shift from nine hours to eight.
1921 – The Ford Motor Company accounts for 55 percent of the automotive industry’s total production.

Source: The Henry Ford

Percents

- The percent symbol (%) may be read aloud as “percent,” and numerals with the symbol may be read aloud the same way as they are read aloud in the classroom.

Examples:

- 48% may be read aloud as “forty-eight percent.”
- 7.5% may be read aloud as “seven point five percent.”
- 0.23% may be read aloud as “zero point two three percent.”

Roman Numerals

- Roman numerals may be read aloud as the numbers they represent.

Example:

World War II may be read aloud as “World War Two.”

Text Boxes

- Items that feature a text box (e.g., a quotation or an excerpt) are read aloud in their entirety. The attribution line is read aloud, but the website and date accessed are NOT read.

Black Codes was a name given to laws passed by southern governments established during the presidency of Andrew Johnson. These laws imposed severe restrictions on freedmen, such as prohibiting their right to vote, forbidding them to sit on juries, and limiting their right to testify against white men. They were also forbidden from carrying weapons in public places and working in certain occupations.

Examples

Mathematics

1. Any text in the test question and answer choices may be read aloud. This example may be read aloud as follows. “The model below is shaded to represent three and seven over one hundred. Which decimal does the model represent? A, three point zero zero seven. B, three point seven. C, three point zero seven. D, zero point three seven.”

The model below is shaded to represent $3 \frac{7}{100}$.

Which decimal does the model represent?

A  3.007
B  3.7
C  3.07
D  0.37
2. The question may be read aloud, as well as labels in the coordinate grid. However, reading aloud the answer choices must follow the guidelines in this document. Only individual numbers and variables within the notation may be read aloud if the student requests this assistance. The test administrator may **NOT** read aloud each answer choice in its entirety.

What is the range of the function graphed on the grid?

\[
\begin{align*}
F & \quad \{ x \mid x = -2, 2, 4 \} \\
G & \quad \{ y \mid -3 \leq y \leq 4 \} \\
H & \quad \{ x \mid -2 \leq x \leq 4 \} \\
J & \quad \{ y \mid y = -3, 0, 4 \}
\end{align*}
\]
3. Any text in the test question or answer choices may be read aloud; however, the triangle and circle should be read aloud as “symbol.” For example, the first equation may be read aloud as “symbol plus symbol equals 11.”

In the equations below, each △ represents the same number.

\[ \bigcirc + \triangle = 11 \]
\[ \triangle \times \triangle = 9 \]

What is the value of \(\bigcirc\)?

A 3
B 2
C 8
D 9

Reading

4. Any text in the test question or answer choices may be read aloud, including the boxed text pulled directly from the reading selection.

Read lines 44 and 45 from the poem.

Instead, I hear winds whisper:

*Free land! You made a choice.*

The poet uses personification in these lines to show that the winds —

A are important to frontier life
B seem to taunt the speaker
C serve as a symbol of the speaker’s anger
D blow gently and quietly on the frontier
Science

5. Any text in the question may be read aloud, including the “Record” directions. The chemical equation may be read aloud as, “C three H eight plus five O two symbol three C O two plus four H two O.” It is NOT allowable to indicate what the arrow represents.

\[ \text{C}_3\text{H}_8 + 5\text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O} \]

How many different elements are involved in the reaction shown above?
Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

6. The first sentence may be read aloud in its entirety. For the graphic, the test administrator should say something similar to, “Take a few moments to look at the graphic and tell me whether you would like anything read aloud. Then let me know when you are ready to go on.” If needed, the information in the graphic may be read aloud as, “F air equals eighty four N.” The text under the graphic and in the answer choices may be read aloud; however, reading aloud the answer choices must follow the guidelines in this document. For example, answer choice A may be read aloud as, “zero point six six meters per second squared backward, because…”

The diagram below shows two different forces acting on a cyclist riding a bicycle.

The total mass of the cyclist and the bicycle is 100.0 kg. Based on this information, what is the acceleration of the cyclist?

A 0.66 m/s² backward, because the force of the air slows the cyclist down
B 0.66 m/s² forward, because the applied force is greater than the force of the air
C 2.3 m/s² backward, because the forces are opposite and not equal
D 2.3 m/s² forward, because the cyclist’s inertia is greater than the force of the air
Social Studies

7. For a graphic, the test administrator should say something similar to, “Take a few moments to look at the map and tell me whether you would like anything read aloud. Then let me know when you are ready to go on.” For example, if the student needs help reading information in the key aloud, the test administrator should point to the words and say, “This says over one million.” However, symbols may NOT be described or interpreted. Once students are ready to go on, any text in the test question and answer choices may be read aloud.

Which of these best explains the change in population and distribution of U.S. cities from 1850 to 1870?

A  The passage of homesteading legislation
B  The admission of new states to the Union
C  The expansion of the railroad system and increased industrialization
D  The emancipation of slaves after the Civil War