The purpose of the ETS High School Equivalency Test (HiSET®) is to certify a candidate's attainment of academic knowledge and skills equivalent to those of a high school graduate. HiSET® scores will identify those candidates who have performed at a level consistent with high school equivalency. Information from the HiSET program also will help identify areas in which candidates are career- and college-ready, as well as areas in which additional preparation may be needed.

Candidates will be tested in five core areas: Language Arts – Reading, Language Arts – Writing, Mathematics, Science, and Social Studies. Descriptions of each of these five tests are contained in this document. Included with the descriptions are sample items that illustrate the types of items that will appear on the test. The HiSET® Practice Tests allow the candidates to view sample content and item types and provide them with general information about their level of preparation for taking the operational form.

Through ongoing validity research, the HiSET program has been connected to college readiness indicators. Candidate performance relative to these indicators is part of the reporting system for the assessment.

The following “Test at a Glance” sections provide an outline of the Content and Process Categories for each subject area.

The emphasis of each category is expressed as the percent of questions per category. This percent is the average number of questions across all 2015 forms on the HiSET exam.
Language Arts – Reading

Test at a Glance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Language Arts – Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>65 minutes</td>
</tr>
<tr>
<td>Number of Questions</td>
<td>40</td>
</tr>
<tr>
<td>Format</td>
<td>Multiple-choice questions</td>
</tr>
</tbody>
</table>

Content Categories

Application of concepts, analysis, synthesis, and evaluation involving:

I. Literary Texts
II. Informational Texts

Process Categories

A. Comprehension
B. Inference and Interpretation
C. Analysis
D. Synthesis and Generalization

About This Test

The Language Arts – Reading test provides evidence of a candidate's ability to understand, comprehend, interpret, and analyze a variety of reading material. The item pool from which the HiSET test forms will be assembled is 60 percent literary content and 40 percent informational content, as defined by CCSS. We note that this is a closer representation of CCSS than the current high school equivalency test. In the ETS HiSET program, candidates will be required to read a broad range of high-quality, increasingly challenging literary and informational texts. The selections are presented in multiple genres on subject matter that varies in purpose and style. The selections may take the form of memoirs, essays, biographical sketches, editorials, or poetry. The texts generally range in length from approximately 400 to 600 words.

Reading Process Categories

In addition to the variety of reading texts, candidates also will answer questions that may involve one or more of the processes described below.

Comprehension

- Understand restatements of information
- Determine the meaning of words and phrases as they are used in the text
- Analyze the impact of specific word choices on meaning and tone
Inference and Interpretation

- Make inferences from the text
- Draw conclusions or deduce meanings not explicitly present in the text
- Infer the traits, feelings, and motives of characters or individuals
- Apply information
- Interpret nonliteral language

Analysis

- Analyze multiple interpretations of a text
- Determine the main idea, topic, or theme of a text
- Identify the author's or speaker's purpose or viewpoint
- Distinguish among opinions, facts, assumptions, observations, and conclusions
- Recognize aspects of an author's style, structure, mood, or tone
- Recognize literary or argumentative techniques

Synthesis and Generalization

- Draw conclusions and make generalizations
- Make predictions
- Compare and contrast
- Synthesize information across multiple sources
Language Arts – Writing

Test at a Glance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Language Arts – Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Part 1 – 75 minutes</td>
</tr>
<tr>
<td></td>
<td>Part 2 – 45 minutes</td>
</tr>
<tr>
<td>Number of Questions</td>
<td>51</td>
</tr>
<tr>
<td>Format</td>
<td>Multiple-choice questions</td>
</tr>
<tr>
<td></td>
<td>Essay question</td>
</tr>
</tbody>
</table>

- **Content Categories – Part 1**
  - I. Organization of Ideas (25%)
  - II. Language Facility (41%)
  - III. Writing Conventions (34%)

- **Content Categories – Part 2**
  - A. Development of Ideas
  - B. Organization of Ideas
  - C. Language Facility
  - D. Writing Conventions

About This Test

The Language Arts – Writing test provides information about a candidate’s skill in recognizing and producing effective standard American written English. Part 1 of the test measures a candidate’s ability to edit and revise written text. Part 2 of the test measures a candidate’s ability to generate and organize ideas in writing.

Part 1 requires candidates to make revision choices concerning organization, diction and clarity, sentence structure, usage, and mechanics. The test questions are embedded in complete texts in the form of letters, essays, newspaper articles, personal accounts, and reports.

The texts are presented as drafts in which parts have been underlined to indicate a possible need for revision. Questions present alternatives that may correct or improve the underlined portions. Aspects of written language that are tested may include appropriate style, logical transitions, discourse structure and organization, conciseness and clarity, or usage and mechanics.
Part 2 of the test measures proficiency in the generation and organization of ideas through a direct assessment of writing. Candidates are evaluated on development, organization, language facility, and writing conventions.

**Content Descriptions**

The following are descriptions of the topics covered in the basic content categories of Part 1. Because the assessments were designed to measure the ability to analyze and evaluate writing, answering any question may involve aspects of more than one category.

**Organization of Ideas**

- *Select logical or effective opening, transitional, and closing sentences*
- *Evaluate relevance of content*
- *Analyze and evaluate paragraph structure*
- *Recognize logical transitions and related words and phrases*

**Language Facility**

- *Recognize appropriate subordination and coordination, parallelism, and modifier placement*
- *Maintain consistent verb tense*
- *Recognize effective sentence combining*

**Writing Conventions**

- *Recognize verb, pronoun, and modifier forms*
- *Maintain grammatical agreement*
- *Recognize idiomatic usage*
- *Recognize correct capitalization, punctuation, and spelling*

Part 2 of the Language Arts – Writing test requires that candidates create written responses that are evaluated for development of ideas, organization of ideas, language facility, and conventions.

**Development of Ideas**

- *Focus on central idea, supporting ideas*
- *Explanation of supporting ideas*

**Organization of Ideas**

- *Introduction and conclusion*
- *Sequencing of ideas*
- *Paragraphing*
- *Transitions*
Language Facility

- Word choice
- Sentence structure
- Expression and voice

Writing Conventions

- Grammar
- Usage
- Mechanics
# Mathematics

## Test at a Glance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>90 minutes</td>
</tr>
<tr>
<td>Number of Questions</td>
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</tr>
<tr>
<td>Format</td>
<td>Multiple-choice questions</td>
</tr>
<tr>
<td>Calculator</td>
<td>Calculator neutral. Please refer to the state policies for the state in which you are testing.</td>
</tr>
</tbody>
</table>

### Content Categories (Approximate Percentage of Questions)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Numbers and Operations on Numbers</td>
<td>19%</td>
</tr>
<tr>
<td>II. Measurement/Geometry</td>
<td>18%</td>
</tr>
<tr>
<td>III. Data Analysis/Probability/Statistics</td>
<td>18%</td>
</tr>
<tr>
<td>IV. Algebraic Concepts</td>
<td>45%</td>
</tr>
</tbody>
</table>

### Process Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Understand Mathematical Concepts and Procedures</td>
<td></td>
</tr>
<tr>
<td>B. Analyze and Interpret Information</td>
<td></td>
</tr>
<tr>
<td>C. Synthesize Data and Solve Problems</td>
<td></td>
</tr>
</tbody>
</table>

## About This Test

The Mathematics test assesses mathematical knowledge and competencies. The test measures a candidate's ability to solve quantitative problems using fundamental concepts and reasoning skills. The questions present practical problems that require numerical operations, measurement, estimation, data interpretation, and logical thinking. Problems are based on realistic situations and may test abstract concepts such as algebraic patterns, precision in measurement, and probability. This test may contain some questions that will not count toward your score. The Mathematics test is calculator neutral. A calculator is not required, but if a test taker requests a calculator, the test center is required to provide one of the following: four-function or scientific calculator. Please refer to the state policies for the state in which you are testing. Some states have specified calculator type/model requirements. A test taker may not bring his or her own calculator to the testing center for use on the HiSET exam.

## Content Descriptions

The following are descriptions of the topics covered in the basic content categories. Because the assessments were designed to measure the ability to integrate knowledge of mathematics, answering any question may involve more than one topic and may involve content from more than one category.
Subsequently, some test questions require the use of formulas. The formulas needed to answer certain questions will be provided via a formula sheet. Test takers should know some formulas prior to testing. Some of these include: distance-rate-time, Pythagorean theorem, and quadratic formula. The formulas below will not be provided on the formula sheet.

- distance = (rate) (time) or \( d = rt \); note \( d \) is distance, \( r \) is rate, and \( t \) is time
- Pythagorean theorem: \( a^2 + b^2 = c^2 \). Note \( c \) is the longest side of the triangle; \( a \) and \( b \) are the other two sides of the triangle
- quadratic formula: \( x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \), where \( ax^2 + bx + c = 0 \) and \( a \neq 0 \)

Representative descriptions of topics covered in each category are provided below.

**Numbers and Operations on Numbers**
- Use properties of operations with real numbers, including rational and irrational numbers.
- Rewrite expressions involving radicals and rational exponents using the properties of exponents.
- Solve problems using scientific notation.
- Reason quantitatively and use units to solve problems.
- Choose a level of accuracy appropriate to limitations on measurement.
- Solve multistep real-world and mathematical problems involving rational numbers in any form and proportional relationships (settings may include money, rate, percent, average, estimation/rounding).
- Perform operations on complex numbers.*
- Solve equations with complex roots.*

**Measurement/Geometry**
- Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
- Know properties of polygons and circles, including angle measure, central angles, inscribed angles, perimeter, arc length and area of a sector, circumference, and area.
- Understand and apply the Pythagorean theorem.
- Understand transformations in the plane, including reflections, translations, rotations, and dilations.
- Use equations of circles.
- Understand properties of lines, including parallel, perpendicular, and midpoint of line segments.
- Use definitions of sine, cosine, and tangent to solve simple problems involving right triangle trigonometry.**
- Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).

**Data Analysis/Probability/Statistics**
- Summarize and interpret data presented verbally, tabularly, and graphically; make predictions and solve problems based on the data. Recognize possible associations and trends in the data.
- Identify line of best fit.
- Find the probabilities of single and compound events.

*Indicates topic will be eliminated in 2016. Topic goes beyond College and Career Readiness description.
**Indicates topic will be eliminated in 2017. Topic goes beyond College and Career Readiness description.
• Approximate the probability of a chance event, and develop a probability model and use it to find probabilities of events.
• Use measures of center (mean) to draw inferences about populations including summarizing numerical data sets and calculation of measures of center.
• Understand how to use statistics to gain information about a population, generalizing information about a population from a sample of the population.

**Algebraic Concepts**

• Interpret parts of an expression, such as terms, factors, and coefficients in terms of its context.
• Perform arithmetic operations on polynomials and rational expressions.
• Write expressions in equivalent forms to solve problems. Factor a quadratic expression to reveal the zeros of the function it defines.
• Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
• Solve quadratic equations in one variable.
• Solve simple rational and radical equations in one variable.
• Solve systems of equations.
• Represent and solve equations and inequalities graphically.
• Create equations and inequalities to represent relationships and use them to solve problems.
• Rearrange formulas/equations to highlight a quantity of interest.
• Understand the concept of a function and use function notation; interpret key features of graphs and tables in terms of quantities. Evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. Write a function that describes a relationship between two quantities.
• Understand domain and range of a function.
• Write a function that describes a relationship between two quantities, including arithmetic and geometric sequences both recursively and with an explicit formula; use them to model situations, and translate between the two forms.
• Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.
• Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
• Calculate and interpret the average rate of change of a function over a specified interval. Estimate rate of change from a graph.

**Mathematics Process Categories**

In addition to knowing and understanding the mathematics content explicitly described in the Content Descriptions section, candidates also will answer questions that may involve one or more of the processes described on the following page. Any of the processes may be applied to any of the content areas of the mathematics test.
Understand Mathematical Concepts and Procedures

- Select appropriate procedures
- Identify examples and counterexamples of concepts

Analyze and Interpret Information

- Make inferences or predictions based on data or information
- Interpret data from a variety of sources

Synthesize Data and Solve Problems

- Reason quantitatively
- Evaluate the reasonableness of solutions
The following is a list of the High School College and Career Readiness Statements that are included in the Mathematics test.

<table>
<thead>
<tr>
<th>CCRS No.</th>
<th>College and Career Readiness Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.RN.2</td>
<td>Rewrite expressions involving radicals and rational exponents using the properties of exponents.</td>
</tr>
<tr>
<td>N.Q.1</td>
<td>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</td>
</tr>
<tr>
<td>N.Q.3</td>
<td>Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</td>
</tr>
<tr>
<td>A.SSE.1</td>
<td>Interpret expressions that represent a quantity in terms of its context.</td>
</tr>
<tr>
<td>A.SSE.1a</td>
<td>Interpret parts of an expression, such as terms, factors, and coefficients.</td>
</tr>
<tr>
<td>A.SSE.3</td>
<td>Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.</td>
</tr>
<tr>
<td>A.SSE.3a</td>
<td>Factor a quadratic expression to reveal the zeros of the function it defines.</td>
</tr>
<tr>
<td>A.APR.1</td>
<td>Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.</td>
</tr>
<tr>
<td>A.APR.6</td>
<td>Rewrite simple rational expressions in different forms.</td>
</tr>
<tr>
<td>A.CED.1</td>
<td>Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions and simple rational and exponential functions.</td>
</tr>
<tr>
<td>A.CED.2</td>
<td>Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</td>
</tr>
<tr>
<td>A.CED.3</td>
<td>Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.</td>
</tr>
<tr>
<td>A.CED.4</td>
<td>Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.</td>
</tr>
<tr>
<td>A.REI.1</td>
<td>Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.</td>
</tr>
<tr>
<td>A.REI.2</td>
<td>Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.</td>
</tr>
<tr>
<td>A.REI.3</td>
<td>Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.</td>
</tr>
<tr>
<td>A.REI.4</td>
<td>Solve quadratic equations in one variable.</td>
</tr>
<tr>
<td>A.REI.6</td>
<td>Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.</td>
</tr>
<tr>
<td>CCRS No.</td>
<td>College and Career Readiness Statements</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>F.IF.1</td>
<td>Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$. The graph of $f$ is the graph of the equation $y = f(x)$.</td>
</tr>
<tr>
<td>F.IF.2</td>
<td>Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.</td>
</tr>
<tr>
<td>F.IF.4</td>
<td>For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.</td>
</tr>
<tr>
<td>F.IF.5</td>
<td>Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.</td>
</tr>
<tr>
<td>F.IF.6</td>
<td>Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.</td>
</tr>
<tr>
<td>F.BF.1</td>
<td>Write a function that describes a relationship between two quantities.</td>
</tr>
<tr>
<td>F.LE.1</td>
<td>Distinguish between situations that can be modeled with linear functions and with exponential functions.</td>
</tr>
<tr>
<td>G.SRT.5</td>
<td>Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.</td>
</tr>
<tr>
<td>G.GMD.3</td>
<td>Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.</td>
</tr>
<tr>
<td>G.MG.2</td>
<td>Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).</td>
</tr>
<tr>
<td>S.ID.3</td>
<td>Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).</td>
</tr>
<tr>
<td>S.ID.5</td>
<td>Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.</td>
</tr>
</tbody>
</table>
Science

Test at a Glance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>80 minutes</td>
</tr>
<tr>
<td>Number of Questions</td>
<td>50</td>
</tr>
<tr>
<td>Format</td>
<td>Multiple-choice questions</td>
</tr>
</tbody>
</table>

Content Categories

- I. Life Science (50%)
- II. Physical Science (29%)
- III. Earth Science (21%)

Process Categories

- A. Interpret and Apply
- B. Analyze
- C. Evaluate and Generalize

About This Test

The Science test provides evidence of a candidate’s ability to use science content knowledge, apply principles of scientific inquiry, and interpret and evaluate scientific information. Most of the questions in the test are associated with stimulus materials that provide descriptions of scientific investigations and their results. Scientific information is based on reports that might be found in scientific journals. Graphs, tables, and charts are used to present information and results.

The science situations use material from a variety of content areas such as: physics, chemistry, botany, zoology, health, and astronomy. The questions may ask candidates to identify the research question of interest, select the best design for a specific research question, and recognize conclusions that can be drawn from results. Candidates also may be asked to evaluate the adequacy of procedures and distinguish among hypotheses, assumptions, and observations.

Content Descriptions

The following are descriptions of the topics covered in the basic content categories. Because the assessments were designed to measure the ability to analyze and evaluate scientific information, answering any question may involve content from more than one category.

**Life Science** topics may include fundamental biological concepts, including organisms, their environments, and their life cycles; the interdependence of organisms; and the relationships between structure and function in living systems.
**Physical Science** topics may include observable properties such as size, weight, shape, color, and temperature; concepts relating to the position and motion of objects; and the principles of light, heat, electricity, and magnetism.

**Earth Science** topics may include properties of earth materials, geologic structures and time, and Earth's movements in the solar system.

**Science Process Categories**

In addition to knowing and understanding the science content explicitly described in the Content Descriptions section, candidates also will answer questions on this assessment that may involve one or more of the processes described below. Any of the processes may be applied to any of the content topics.

**Interpret and Apply**

- Interpret observed data or information
- Apply scientific principles

**Analyze**

- Discern an appropriate research question suggested by the information presented
- Identify reasons for a procedure and analyze limitations
- Select the best procedure

**Evaluate and Generalize**

- Distinguish among hypotheses, assumptions, data, and conclusions
- Judge the basis of information for a given conclusion
- Determine relevance for answering a question
- Judge the reliability of sources
**Social Studies**

<table>
<thead>
<tr>
<th>Test at a Glance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Name</strong></td>
</tr>
<tr>
<td><strong>Time</strong></td>
</tr>
<tr>
<td><strong>Number of Questions</strong></td>
</tr>
<tr>
<td><strong>Format</strong></td>
</tr>
</tbody>
</table>

**Content Categories**

I. History (38%)
II. Civics/Government (38%)
III. Economics (18%)
IV. Geography (6%)

**Process Categories**

A. Interpret and Apply
B. Analyze
C. Evaluate and Generalize

**About This Test**

The Social Studies test provides evidence of a candidate's ability to analyze and evaluate various kinds of social studies information. The test uses materials from a variety of content areas, including history, political science, psychology, sociology, anthropology, geography, and economics. Primary documents, posters, cartoons, timelines, maps, graphs, tables, charts, and reading passages may be used to present information. The questions may ask candidates to distinguish statements of fact from opinion; recognize the limitations of procedures and methods; and make judgments about the reliability of sources, the validity of inferences and conclusions, and the adequacy of information for drawing conclusions.

**Content Descriptions**

The following are descriptions of the topics covered in the basic content categories. Because the assessments were designed to measure the ability to analyze and evaluate various kinds of social studies information, answering any question may involve content from more than one category.

*History* may include historical sources and perspectives; the interconnections among the past, present, and future; and specific eras in U.S. and world history, including the people who have shaped them and the political, economic, and cultural characteristics of those eras.
**Civics/Government** may include the civic ideals and practices of citizenship in a democratic society; the role of the informed citizen and the meaning of citizenship; the concepts of power and authority; the purposes and characteristics of various governance systems, with particular emphasis on the U.S. government; and the relationship between individual rights and responsibilities, and the concepts of a just society.

**Economics** may include the principles of supply and demand; the difference between needs and wants; the impact of technology on economics; the interdependent nature of economies; and how the economy can be affected by governments, and how that effect varies over time.

**Geography** may include concepts and terminology of physical and human geography; geographic concepts to analyze spatial phenomena and discuss economic, political, and social factors; and interpretation of maps and other visual and technological tools, and the analysis of case studies.

**Social Studies Process Categories**

In addition to knowing and understanding the social studies content described in the Content Descriptions section, candidates also will answer questions that may involve one or more of the processes described below. Any of the processes may be applied to any of the content topics.

**Interpret and Apply**

- Make inferences or predictions based on data or other information
- Infer unstated relationships
- Extend conclusions to related phenomena

**Analyze**

- Distinguish among facts, opinions, and values
- Recognize the author’s purpose, assumptions, and arguments

**Evaluate and Generalize**

- Determine the adequacy of information for reaching conclusions
- Judge the validity of conclusions
- Compare and contrast the reliability of sources