

Reporting Category Statements B.E.S.T. Standards: Mathematics

May 2024

Copyright Statement for This Office of Assessment Publication

Authorization for reproduction of this document is hereby granted to persons acting in an official capacity within the Uniform System of Public K–12 Schools as defined in Section 1000.01(4), Florida Statutes. The copyright notice at the bottom of this page must be included in all copies.

All trademarks and trade names found in this publication are the property of their respective owners and are not associated with the publishers of this publication.

This publication is provided by the Florida Department of Education to Florida public schools free of charge and is not intended for resale.

Permission is **not** granted for distribution or reproduction outside of the Uniform System of Public K–12 Schools or for commercial distribution of the copyrighted materials without written authorization from the Florida Department of Education. Questions regarding use of these copyrighted materials should be sent by email to Assessment@fldoe.org or by postal mail to the following address:

Bureau of K–12 Student Assessment
Florida Department of Education
325 West Gaines Street
Tallahassee, Florida 32399–0400

Copyright © 2024
State of Florida
Department of State

Introduction

Students who participate in one or more of Florida's statewide, standardized assessments in grades 3–10 and/or end-of-course (EOC) assessments in Algebra 1, Geometry, Civic, U.S. History, and Biology 1 will receive a detailed score report that is unique to computer-adaptive assessments for each assessment. Each report will contain detailed information about the student's performance, narratives regarding strengths and weaknesses, and suggestions as to steps parents/guardians can take to help students progress in their learning. The information in each report is intended primarily for students and families and is not intended to replace classroom instruction.

The most detailed narrative is provided at the *reporting category* level. Reporting categories refer to major groupings of content and skills, such as Reading Informational Text or Reading Prose and Poetry in English Language Arts (ELA); Number Sense and Operations with Whole Numbers or Algebraic Reasoning in Mathematics; Nature of Science in Science; and Roles, Rights, and Responsibilities in Social Studies; among others. For each of the reporting categories, three tiers of text have been created based on state academic standards and informed by the Achievement Level Descriptors (ALDs) that were written by Florida educators. These tiers include *Below Expectations*, *At/Near Expectations* or *On Grade Level*, and *Above Expectations*. These reports classify student performance into one of the three tiers based on student responses to items that measure the benchmarks associated with that reporting category. Individual benchmark codes can be found in a report beneath the name of the correlated reporting category. Each student's report is tailored to provide specific information based on which of the three tiers that each reporting category score falls into. This document provides the complete set of narratives so that stakeholders can see expectation progressions within a reporting category and, if appropriate, across grades.

Each description included in these reports and the accompanying next steps were drafted by panels of Florida educators and reviewed by larger Florida educator committees facilitated by EdCount, LLC, and consisting of Florida educators, specialists from the Bureau of Standards and Instructional Support and other Florida Department of Education personnel.

It is important to keep in mind that a student's overall score provides the most valid and reliable evidence of what the student knows and can do with respect to the state academic standards. Due to the relatively small size of each reporting category, neither individual nor combined reporting category performance should be used to infer overall performance.

For more information on Florida's statewide, standardized assessments, please see the [Statewide Assessments Guide](#). Please direct questions and comments about these reports to Assessment@fldoe.org.

Additional Resources

The following resources are available to support understanding of the test design for Florida's statewide, standardized assessments and the skills outlined in the state academic standards.

[B.E.S.T. Standards Achievement Level Descriptions](#)

[Florida's B.E.S.T. Standards: Mathematics](#)

[FAST Mathematics and B.E.S.T. EOC Test Design Summary](#)

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Grade 7 Mathematics Reporting Category Statements

Number Sense and Operations and Algebraic Reasoning See Benchmarks for Excellent Student Thinking 7.NSO.1.1, 7.NSO.1.2, 7.NSO.2.1, 7.NSO.2.2, 7.NSO.2.3, 7.AR.1.2 (including 7.AR.1.1), 7.AR.2.1, 7.AR.2.2			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Identify exponential expressions. - Identify equivalent fractions, mixed numbers, and decimals. - Use the four basic operations to solve problems that include variables. - Solve equations with minimal steps using the order of operations, whole number exponents, and absolute value. - Solve one-step inequalities and two-step equations with all positive integers or one rational number.	For example, your learner may be able to: - Apply Laws of Exponents to evaluate exponential expressions. - Rewrite different forms of rational numbers to solve problems. - Use the four basic operations to solve problems involving rational numbers and variables. - Use the order of operations with rational numbers in the same form, including negatives, to solve both real-world and mathematical problems. - Write and solve one-step inequalities and two-step equations with rational numbers in the same form.	For example, your learner may be able to: - Apply Laws of Exponents to generate exponential expressions. - Rewrite different forms of rational numbers to solve problems and justify the form chosen. - Use the four basic operations to solve problems, including expressions with variables and analyze errors. - Solve real-world problems involving operations and interpret the solution in the context of the problem that is presented. - Write and solve one-step inequalities and two-step equations and interpret the solution in context of the situation presented.
Next Steps	For example, have your learner: - Practice simple operations using exponents, fractions, mixed numbers, and/or decimals (e.g., by calculating prices or adjusting recipes for different serving sizes). - Share which operation would be used to arrive at solutions in real-world contexts, such as money exchanges, travel costs, or travel time. - Solve problems involving negative numbers using examples such as	For example, have your learner: - Practice operations using exponents, fractions, mixed numbers, and decimals by calculating the price of gas or the cost of groceries. - Convert between decimals and fractions to describe quantities in real-world contexts such as with money and food portions.	For example, have your learner: - Use operations in everyday situations such as income, expenditures, travel, or taxes. - Practice real-world application skills by explaining which operations are used to find solutions in various multi-step problems. - Practice writing scenarios that represent one-step inequalities, such as how many items can be purchased with a given amount of money.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Number Sense and Operations and Algebraic Reasoning See Benchmarks for Excellent Student Thinking 7.NSO.1.1, 7.NSO.1.2, 7.NSO.2.1, 7.NSO.2.2, 7.NSO.2.3, 7.AR.1.2 (including 7.AR.1.1), 7.AR.2.1, 7.AR.2.2			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
	banking, temperatures, and distance above/below sea level.		Practice writing scenarios that represent two-step equations such as finding the cost of a monthly subscription for several months, including a sign-up fee, given the total cost.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Proportional Reasoning and Relationships See Benchmarks for Excellent Student Thinking 7.AR.3.1, 7.AR.3.3, 7.AR.4.1, 7.AR.4.2, 7.AR.4.3, 7.AR.4.4, 7.AR.4.5 (including 7.AR.3.2)			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Identify ratios. - Solve problems involving a single conversion of units across different measurement systems, given a whole number measurement. - Define a proportional relationship. - Graph proportional relationships from a table.	For example, your learner may be able to: - Apply ratios to real-world problems. - Solve problems involving the conversion of units across different measurement systems (length, area, weight, mass, volume, and money). - Determine a proportional relationship by examining a table or graph. - Graph a proportional relationship from a table or equation. - Find the constant of proportionality from a table or graph.	For example, your learner may be able to: - Solve and interpret multi-step real-world problems involving percents. - Solve and interpret problems involving the conversion of units across different measurement systems. - Identify and justify proportional relationships by explaining whether the ratio between the two quantities is proportional. - Graph a proportional relationship from a table, equation, or written description. - Determine and interpret the constant of proportionality from a table, graph, or written description.
Next Steps	For example, have your learner: - Practice calculating sale prices and discounts. - Practice measurement conversion by adjusting recipes or using sales ads. - Use proportions to solve real-world problems involving cost, speed, and distance.	For example, have your learner: - Practice multi-step problems by calculating tips and taxes and adding them to the total bill. - Use multiple sales ads to explain whether a deal saves money given the information. - Set up and solve proportions to practice conversions, such as currency conversions.	For example, have your learner: - Practice calculating percentages in the real-world, such as a sale at a store or a tip for a server. - Compare different proportional relationships to determine which is the better value (e.g., price per pound of a 5-pound bag of flour versus price per pound of a 10-pound bag of flour). - Explore proportional relationships with models and maps.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Geometric Reasoning See Benchmarks for Excellent Student Thinking 7.GR.1.1, 7.GR.1.2, 7.GR.1.3, 7.GR.1.4, 7.GR.1.5, 7.GR.2.1, 7.GR.2.2, 7.GR.2.3			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Identify expressions for finding the area of trapezoids, parallelograms, rhombi, and circles. - Identify expressions that can be used for the circumference of a circle and area of a given circle. - Identify the scale factor in mathematical problems involving dimensions of geometric figures. - Determine the expression used for surface area and/or volume.	For example, your learner may be able to: - Apply formulas to find the circumference of a circle and the area of parallelograms, rhombi, and circles. - Solve mathematical problems involving the area of composite figures composed of triangles or rectangles. - Explore the proportional relationship between the circumference and diameter of circles. - Find the surface area and volume of a right circular cylinder.	For example, your learner may be able to: - Apply formulas to find the circumference of a circle and the area of parallelograms, rhombi, trapezoids, circles, and fractional parts of a circle. - Solve real-world problems involving the area of composite figures and multiple polygons. - Apply the formula for the circumference of a circle and interpret the solution. - Solve and interpret real-world problems involving areas, volumes, and surface areas of right circular cylinders. - Solve problems including scale drawings and scale factors.
Next Steps	For example, have your learner: - Find right triangles and rectangles within other shapes to find the area. - Calculate the area of objects at home. - Explore surface area by using canned food labels and their measurements.	For example, have your learner: - Design structures such as a park, an event center, or a driveway with pavers and calculate the total area of objects that would fit within the space. - Practice finding scale factor by comparing model cars and a real car or measurements on a map. - Measure a cylinder found in your home, calculate the volume and surface area.	For example, have your learner: - Explore the relationship between two- and three-dimensional figures. - Redesign a room and determine the total allowable measurements of objects that would fit within that space. - Identify objects that are cylinders and calculate and compare the volume of each. - Create a drawing of rooms in a home or building using a scale factor.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Data Analysis and Probability See Benchmarks for Excellent Student Thinking 7.DP.1.1, 7.DP.1.2, 7.DP.1.3, 7.DP.1.4, 7.DP.1.5, 7.DP.2.1, 7.DP.2.2, 7.DP.2.3, 7.DP.2.4			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Identify outliers in a data set. - Calculate mean, median, mode, and range from a data set. - Identify an appropriate circle graph for a data set. - Identify events that are certain or uncertain to occur. - Construct and display data using proportional reasoning. - Determine theoretical probabilities.	For example, your learner may be able to: - Calculate mean, median, mode, range, measure of center, and measures of variability when given two graphical representations of data. - Construct, display, and interpret data in up to four categories in a circle graph. - Choose an appropriate graphical representation for a data set. - Interpret the likelihood of chance events in the same form. - Determine experimental probabilities.	For example, your learner may be able to: - Determine the appropriate measure of center or measure of variation to summarize numerical data. - Make comparisons, interpret results, draw conclusions, and make predictions regarding two numerical or graphical sets of data. - Construct, display, and interpret data in up to six categories in a circle graph. - Choose, create, and justify appropriate graphical representations (for example: stem-and-leaf plots and line plots). - Compare experimental and theoretical probabilities.
Next Steps	For example, have your learner: - Interpret weather reports using terms such as likely or unlikely for chance of precipitation. - Collect data (e.g., family television time or time on devices) and construct representations of the data.	For example, have your learner: - Collect data from dice rolls or flipping a coin, determine a sample space, and create a representation of the data set. - Use statistics from real-world settings (e.g., money or sports) to interpret what the data mean in terms of events being likely or unlikely to occur.	For example, have your learner: - Use statistics from real-world settings (e.g., money or sports) to make predictions. - Interpret weather reports to summarize the variation in temperature throughout the day.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Grade 8 Mathematics Reporting Category Statements

Number Sense and Operations and Probability See Benchmarks for Excellent Student Thinking 8.NSO.1.1, 8.NSO.1.2, 8.NSO.1.3, 8.NSO.1.4, 8.NSO.1.5, 8.NSO.1.6, 8.NSO.1.7, 8.DP.2.1, 8.DP.2.3 (including 8.DP.2.2)			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Identify numbers as rational or irrational. - Apply one of the Laws of Exponents to identify equivalent numerical expressions with integer exponents. - Determine which number is larger when given two numbers in scientific notation. - Solve multi-step mathematical problems with up to three steps involving the order of operations. - Solve real-world problems involving probabilities of single experiments.	For example, your learner may be able to: - Define irrational numbers and locate approximate values of irrational numbers on a number line. - Plot, order, and compare rational and irrational numbers. - Evaluate numerical expressions and identify equivalent expressions using the Laws of Exponents with integer exponents. - Express numbers in scientific notation and approximate very large quantities. - Solve multi-step real-world problems with up to five steps involving the order of operations. - Solve real-world problems involving probabilities of single or repeated experiments and make predictions based on theoretical probability.	For example, your learner may be able to: - Explain why an approximate value of a numerical expression on a number line is reasonable. - Generate equivalent numerical expressions when applying the Laws of Exponents. - Express and apply operations with numbers in scientific notation and approximate very large and very small quantities. - Solve multi-step real-world problems with up to six steps involving the order of operations and justify each step. - Analyze an error in a repeated experiment. - Analyze the theoretical probability of an event related to a repeated experiment.
Next Steps	For example, have your learner: - Practice placing rational numbers on a number line. - Use scientific notation to discuss topics, such as the distance from planets and stars, the size of microorganisms, and global populations. - Practice determining theoretical probabilities by using different scenarios, such as finding the	For example, have your learner: - Convert rational numbers to the same form and order the numbers on a number line. - Review correct and incorrect multi-step numerical expressions that are already solved and write out the steps taken to find the solution.	For example, have your learner: - Create notecards with numbers in scientific notation, randomly choose two cards, and use all four operations with the chosen numbers. - Explore real-world contexts involving radical numbers such as calculating the depreciation of a car's value. - Find probabilities of an event, such as the outcome of a sporting event or a change in weather. Determine whether

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Number Sense and Operations and Probability See Benchmarks for Excellent Student Thinking 8.NSO.1.1, 8.NSO.1.2, 8.NSO.1.3, 8.NSO.1.4, 8.NSO.1.5, 8.NSO.1.6, 8.NSO.1.7, 8.DP.2.1, 8.DP.2.3 (including 8.DP.2.2)			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
	theoretical probability of selecting a gray shirt and a blue pair of socks from a basket.		the outcomes could have been predicted from a theoretical probability and analyze the accuracy of the prediction.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Algebraic Reasoning			
See Benchmarks for Excellent Student Thinking 8.AR.1.1, 8.AR.1.2, 8.AR.1.3, 8.AR.2.1, 8.AR.2.2, 8.AR.2.3, 8.AR.4.1, 8.AR.4.2, 8.AR.4.3			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: • Apply the Laws of Exponents when identifying equivalent algebraic expressions using one Law of Exponents. • Apply properties of operations to multiply two linear expressions with integer coefficients. • Solve multi-step linear equations with variables on one side. • Recognize that a solution to a system of equations is an ordered pair. • Identify the solution when given a graph of two lines.	For example, your learner may be able to: • Apply the Laws of Exponents to identify equivalent algebraic expressions. • Apply properties of operations to multiply two linear expressions with rational coefficients. • Solve multi-step linear equations in one variable that generate one solution. • Determine the ordered pair that satisfies the solution to a system of linear equations. • Rewrite an algebraic expression as the product of a monomial and the sum of two algebraic expressions.	For example, your learner may be able to: • Provide justification for applying the Laws of Exponents to generate equivalent algebraic expressions. • Solve multi-step linear equations that generate one solution, no solution, or infinitely many solutions and interpret the solution in context. • Solve two-step linear inequalities and graph solutions of them. • Solve a system of equations from a set of possible solutions. • Determine from a graph whether there is no solution or infinitely many solutions to a system.
Next Steps	For example, have your learner: • Graph lines in slope-intercept form ($y = mx + b$) by charting the constant rate of change over time, such as earnings per hour. • Graph inequalities by determining what numbers would make a statement true and placing it on the number line (e.g., $x > 6$. <i>What numbers make this true?</i>).	For example, have your learner: • Make flashcards for the exponent rules. Use the flashcards for fluency and solving problems. • Solve systems of equations where two lines intersect is a solution, no lines intersect is no solution, and if the lines are the same there are infinite solutions. • Practice real-world two-step inequalities, such as determining how many snacks can be bought after purchasing a movie ticket with a limited amount of money to spend.	For example, have your learner: • Find graphs with intersecting lines to interpret the meaning of the intersection in context of the graph, such as line graphs that display changes in population demographics, tv viewership, or online platform preferences over time. • Explore scenarios when a system of equations would be beneficial, such as determining the best cell phone plan.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Linear Relationships, Data Analysis, and Functions See Benchmarks for Excellent Student Thinking 8.F.1.1, 8.F.1.2 (including 8.AR.3.1), 8.F.1.3, 8.AR.3.2, 8.AR.3.3, 8.AR.3.4, 8.AR.3.5, 8.DP.1.1, 8.DP.1.2, 8.DP.1.3			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: - Determine from a graph whether a relationship is linear. - Determine the slope and y-intercept from slope-intercept form. - Identify the graph that represents a given linear equation in slope-intercept form. - Identify a scatter plot, the type of association, and outliers when given data.	For example, your learner may be able to: - Determine whether a function is linear from an equation. - Graph linear equations from a table or an equation. - Determine the slope from a written description, table, graph, or equation in slope-intercept form. - Identify the domain and range of the relation as a list of numbers. - Construct a scatter plot or line graph, identify the association, and identify outliers. - Identify a line of fit on a scatter plot.	For example, your learner may be able to: - Determine whether a relationship is a function from any representation. - Determine dependent and independent variables. - Determine the slope and write equations in slope-intercept form. - Graph linear equations to satisfy a real-world context. - Construct a scatter plot or line graph while describing patterns of association and identifying outliers. - Justify a line of fit on a scatter plot.
Next Steps	For example, have your learner: - Track data, such as hours per day engaging in a favorite hobby, for one or two weeks, use the data to create a table [Day Number (x) and Amount of Time (y)], graph the results, and determine whether the data represents a linear relationship. - Practice using vocabulary terms related to graphing (for example, slope, y-intercept, linear). - Find data to create scatter plots.	For example, have your learner: - Review scatter plots from online or print sources, determine the association, and identify whether the scatter plot is linear or nonlinear. - Generate output tables by practicing basic functions (addition, subtraction, multiplication, and division). - Track data, such as hours per day engaging in a favorite hobby, for one or two weeks, use the data to create a table [Day Number (x) and Amount of Time (y)], and develop a scatter plot.	For example, have your learner: - Explore the relationship between dependent and independent variables and patterns found in real-world contexts for linear and nonlinear data (e.g., how water affects plant growth or how diet affects weight). - Track data for one or two weeks (e.g., hours per day engaging in a favorite hobby), use the data to create a table [Day Number (x) and Amount of Time (y)], graph the results, and write the equation of the line in slope-intercept form.

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.

Geometric Reasoning			
See Benchmarks for Excellent Student Thinking 8.GR.1.1, 8.GR.1.2, 8.GR.1.3, 8.GR.1.4, 8.GR.1.5, 8.GR.1.6, 8.GR.2.1, 8.GR.2.2, 8.GR.2.3, 8.GR.2.4			
Indicator	Below Expectations	At/Near Expectations	Above Expectations
What These Results Mean	For example, your learner may be able to: • Apply the Pythagorean Theorem to find the hypotenuse of a right triangle resulting in a whole number. • Use the Pythagorean Theorem to find the missing side length of a right triangle and distance between two points on a coordinate plane. • Define angle relationships. • Generate or identify a translation.	For example, your learner may be able to: • Apply the Pythagorean Theorem to solve problems involving unknown side lengths in right triangles. • Apply the Pythagorean Theorem to find unknown side lengths and distance between two points on a coordinate plane. • Solve problems involving angle relationships and their numerical angle measures. • Develop formulas for the interior angles of regular polygons. • Identify transformations.	For example, your learner may be able to: • Apply the Pythagorean Theorem to mathematical and real-world problems. • Solve problems involving multiple relationships between angles. • Develop and use formulas for the sum of interior angles of regular polygons. • Identify, analyze, and describe a transformation that represents a relationship.
Next Steps	For example, have your learner: • Practice real-world problems involving the Pythagorean theorem (e.g., television measurements, computer screens, or cell phones). • Create flashcards to practice angle terminology and explore angle measurements in real-life settings. • Explore items that can reflect an image (e.g., looking in a mirror or a camera on a phone).	For example, have your learner: • Use a random number generator to choose three numbers and determine whether the three numbers can form a triangle. • Practice real-world problems involving the Pythagorean Theorem (e.g., television measurements, computer screens, or cell phones). • Explore rotation by determining how many degrees an item rotates.	For example, have your learner: • Explore relationships between angles in the real-world (e.g., in sports, clothing design, or construction). • Explore transformations of objects (e.g., in art, landscaping, or interior design).

Disclaimer: This document is informational and is not for instructional purposes. The knowledge and skills described do not encompass all that a student is expected to learn in this grade.