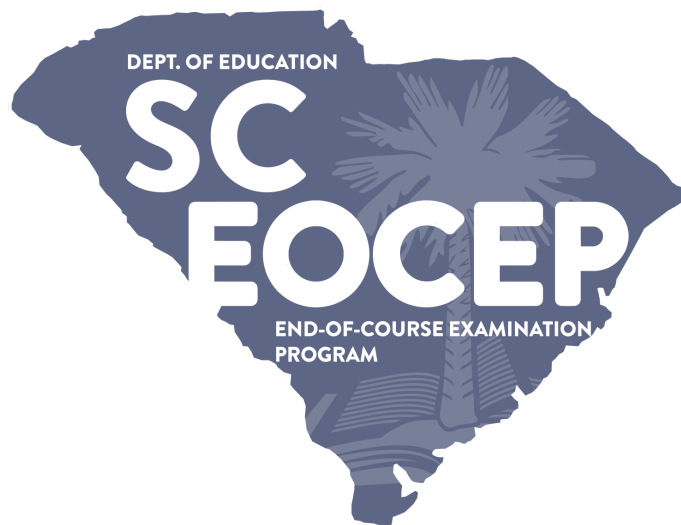




2026 Data Review Report

Statewide Instructional Recommendations

Algebra 1

Office of Assessment and Standards

October 2026

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Introduction

The [South Carolina Department of Education](#) (SCDE) Office of Assessment and Standards (OAS) extends our deepest gratitude to the hard-working teachers across our state. We are especially thankful for the educators who dedicate their time to participate in our annual assessment meetings. Your collaboration is what makes these reports possible.

What is the Data Review Committee?

As part of our [Test Development Cycle](#) every year, the SCDE gathers educators from across South Carolina for virtual Data Review Meetings. This group of dedicated educators forms our *Data Review Committee*, a specialized team tasked with examining state-level, item-by-item test data to better understand student ability and identify where students are struggling with specific standards.

From Numbers to Strategies

For this report, the Committee focused on the End-of-Course Examination Program (EOCEP) Algebra 1 assessment, which measures the *2025 South Carolina College- and Career-Ready Mathematics Standards (2025 SC CCR Math Standards)*. While every standard is assessed on the EOCEP Algebra 1 assessment, this report selectively highlights key indicators where statewide trends point to clear, actionable recommendations for the classroom.

The Committee looks closely at the *quantitative* data, how students across the entire state responded to test items. They use these numbers to produce a *qualitative* analysis. In other words, they look at the data to figure out *why* students are struggling, and then they offer actionable, instructional recommendations on how to improve student achievement on those topics.

A Redesigned Format

Based directly on feedback from teachers across the state, we have redesigned the Data Review Reports to be more useful for your daily practice. The reports are now organized by standards and indicators. Within each section, you will find:

- **Observations:** What the data tells us about student understanding and misconceptions.
- **Instructional Recommendations:** Practical strategies to address learning gaps.

How to Use This Report

The goal of this report is to provide clear suggestions to improve instructional practice and inspire collaborative discussions at your school. Offered in a spirit of helpfulness and collaboration, these recommendations reflect broad, statewide trends. Because every classroom is unique, we recognize that certain identified gaps or suggestions may not align with every individual school or district.

Get Involved and Learn More

The OAS provides numerous resources for districts, schools, and teachers to help clarify the standards, understand how our assessments align with them, and make the most of test data.

Our [Assessment Quick Links for Teachers Page](#) includes the following resources for Algebra 1 educators:

- [Applications for Assessment Committees](#): Apply to Content Review Committees, Data Review Committees, and more.
- [Test Blueprints](#): Broadly outline the test construct in terms of content and rigor.
- [Assessment Specifications for Teachers](#): Guidance on how standards are assessed on the EOCEP (distinct from how a concept is taught).
- [Data Review Reports](#): Access older reports from various content areas.
- [Item Type Descriptions](#): Breakdown of the item formats students encounter on the EOCEP assessments.
- [Sample Items](#): Grade- and content-aligned items demonstrating the EOCEP formats.
- [Online Tools Training \(OTT\)](#): Allows students to practice interacting with online tools in the official testing environment.
- [Calculator Requirements](#): Guidelines for use and allowable calculators.

Our [Math Standards Page](#) includes:

- [Standards](#): The *2025 South Carolina College- and Career-Ready Mathematics Standards*.
- [Instructional Resources](#): Support materials designed to help teachers instruct the *2025 SC CCR Math Standards*.
- [Professional Learning Opportunities](#): District-level professional learning menus and recordings of past webinars.

Interested in Statewide Assessment Data?

[State-level assessment data](#) is published each year on our website. You can explore the [2026 EOCEP Test Scores](#) directly through our online interactive tools or download full data files from the right side of the page.

Want to make an impact?

If you are interested in joining an annual assessment committee, we invite you to [apply through our website!](#)

Statewide Trends for Algebra 1

Strengths

Students demonstrated stronger performance on skills that involved applying established algebraic procedures and interpreting clearly defined mathematical features. Across the state, students were generally more successful when solving linear equations, systems of equations, and inequalities, as well as determining and interpreting solutions within mathematical and real-world contexts. Students also showed strength in working with linear relationships across equations, graphs, tables, and verbal descriptions when tasks required direct application of familiar procedures.

Students also performed well on skills related to identifying and interpreting key features of linear and quadratic relationships. Areas of strength include interpreting slope as a rate of change, identifying solutions to linear systems, determining solutions to quadratic equations, and using lines of best fit to describe relationships in bivariate data. Overall, students demonstrated greater success on structured, solution-focused tasks that required applying known procedures and interpreting results within a given context.

Areas for Growth

An opportunity for growth is deepening students' conceptual understanding of function families and their ability to reason across multiple representations. While students were generally successful working with linear relationships in familiar contexts, trends in student performance suggest that they would benefit from additional experiences connecting and analyzing linear, absolute value, quadratic, and exponential functions through graphs, tables, equations, verbal descriptions, and real-world situations. Strengthening students' understanding of how key characteristics of function families are reflected across representations can support more flexible mathematical thinking and deeper conceptual understanding.

Students also appeared to be more challenged by tasks that required higher levels of cognitive complexity. Performance was generally lower on items that asked students to justify their reasoning, compare representations, evaluate relationships, draw conclusions, or apply mathematical concepts in less structured situations. Many of these tasks also required students to identify relevant information from detailed contexts before determining an appropriate solution. Continued opportunities to engage with rich, multi-step tasks that emphasize reasoning, interpretation, justification, and connections among representations can help students strengthen conceptual understanding and apply mathematics more flexibly in unfamiliar situations.

Committee Observations and Recommendations

The following instructional recommendations, identified by this year's Data Review Committee, provide actionable strategies to improve student achievement.

General Observations and Recommendations

- Prioritize conceptual understanding, interpretation, and real-world application *alongside* procedural fluency by requiring students to identify, analyze, and interpret information rather than simply apply formulas.
- Encourage the use of the [Mathematical Process Standards](#) to reason, justify answers, eliminate incorrect choices, and solve problems strategically.
- Incorporate authentic situations, modeling tasks, and data analysis to strengthen engagement and transfer of learning while discussing the reasonableness and limitations of mathematical models in context.
- Attend to academic vocabulary and help students make connections across multiple representations, including recognizing when different terms describe the same mathematical idea (e.g., solution, zero, root, and x-intercept). Incorporate Tier 1, Tier 2, and Tier 3 vocabulary instruction in every unit, including real-world terms that may appear in contexts (e.g., gardener, model). Teachers are encouraged to collaborate with special education teachers on pre-teaching and reteaching key vocabulary.
- Provide students with regular opportunities to use [Desmos](#) and other approved mathematical tools throughout the school year so that technology becomes a natural part of problem solving. This could be used to support students in:
 - analyzing graphs and functions
 - exploring data and mathematical models
 - identifying and interpreting solutions
 - verifying reasoning and results
- Use the [Online Tools Training \(OTT\)](#) to practice graphing technology-enhanced items and help students distinguish between plotting a point and graphing an entire line.
- Have students create, analyze, and compare equations and functions throughout the year and solve problems both algebraically and graphically.
- Make connections across standards rather than teaching topics in isolation.

The following observations and recommendations for the selected indicators in this report are organized by the three reporting categories identified in the [EOCEP Algebra 1 Test Blueprint 2026-27](#): **Statistical and Geometrical Modeling; Numerical Reasoning, Patterns and Algebraic Reasoning** and **Functional Reasoning**. For a complete list of the indicators included within each reporting category, refer to the test blueprint

Statistical and Geometrical Modeling; Numerical Reasoning

A1.DPSR.1.1

Observation: Two-way tables are new to Algebra 1 this year. While more than half of the students answered correctly, the committee observed that a quarter of students appeared to match values from the given information to an answer option, rather than analyzing the relationships represented by the data.

Instructional Recommendations:

- Teach students to annotate the text as they would in ELA. For example, have students highlight relevant information and strike through irrelevant information before solving.
- Focus on one row or column at a time rather than the entire table.
- Students should understand marginal and joint frequencies by examining how values fit within a two-way table and explaining how the values are related before selecting an answer.
- Teach students to “total the columns” when they are not provided and use those totals to:
 - find missing information
 - eliminate distractors
 - check solutions by working backwards
 - verify that answers are reasonable

This practice reinforces the use of the Mathematical Process Standards by promoting strategic reasoning and solution verification.

- Use Think-Pair-Share and small-group discussions to have students compare strategies, explain their thinking, justify their answers, and evaluate different approaches.

A1.DPSR.1.3

Observation: Some students had difficulty distinguishing the line of best fit when the graphs appeared similar.

Instructional Recommendations:

- Incorporate error-analysis activities comparing appropriate and inappropriate lines of best fit.
- Teach students that the line of best fit models an overall trend in the data rather than connecting individual data points. Ask, “How far are the data points from the line and does it create outliers?” and “Are there any outliers?”
- Build on students’ prior Geometry with Statistics experience with scatter plots by emphasizing the meaning of the data and line of fit, including when predictions overestimate or underestimate actual values.

A1.DPSR.1.4

Observation: The committee observed that some students who performed well overall correctly identified the negative correlation shown in the graph but misinterpreted the strength of the correlation.

Instructional Recommendations:

- Teach students that r-values range between -1 to 1 and relate those numbers to how tight the data is to the line of best fit.
- Create a “correlation coefficient number line” from -1 to 1 to have students sort graphs and r-values by direction (positive or negative) and strength of correlation.
- Ensure students are comfortable using technology such as the TI-84 calculator or the [SC testing version of Desmos](#) to find the correlation coefficient rather than relying solely on visual approximation.

A1.DPSR.2.2

Observation: Teachers observed that interpreting slope and y-intercept in context remained challenging for some students.

Instructional Recommendations:

- Use anchor charts to help students identify the independent and dependent variables and interpret slope in context (e.g., “the slope will increase/decrease every y per 1x”). Having students write these statements can strengthen connections between graphs, equations, and verbal descriptions over time.
- Build on students’ prior understanding of slope and unit rate from Geometry.

A1.DPSR.2.3

Observation: A common misconception was that students attempted to read a predicted value directly from the graph or substituted a value for x instead of y when applying the equation of the linear model.

Instructional Recommendations:

- Highlight key information needed in the statement and highlight the same information on the graph.
- Ensure students have a clear understanding of multiple representations and when each representation is most useful to answer a question.

A1.NR.2.1

Observation: Students demonstrated difficulty translating between exponential and radical notation when written in a verbal format. For example, the expression $4^{1/2}$ could be rewritten as “the square root of 4 to the first power”, or “the square root of 4”, and not “the square root of 4 times two”.

Instructional Recommendations:

- Encourage students to explain the meaning of fractional exponents.
- Connect radicals and rational exponents and use multiple representations to illustrate equivalence.
- Develop anchor charts focusing on exponent vocabulary and structure.

Patterns and Algebraic Reasoning

A1.PAFR.1.2

Observation: When solving a literal equation involving a fraction and an exponent the committee observed that some students struggled to identify and apply inverse operations, while other students, even high-performing students, selected a response that reversed the numerator and denominator.

Instructional Recommendations:

- Teach students to annotate formulas and identify the target variable before solving.
- Encourage students to work backward through the order of operations and determine which inverse operations are needed to isolate the variable.
- Have students routinely ask, “What is happening to the variable, and how do I undo it?”
- Reinforce or reteach the relationship between multiplication, division, and reciprocals, emphasizing that dividing by a fraction is equivalent to multiplying by its reciprocal. For example, *dividing by $\frac{1}{4}$ is equivalent to multiplying by 4.*
- Rewrite fractions as division expressions to strengthen conceptual understanding of inverse operations.
- Provide regular practice solving literal equations involving fractions, exponents, and multi-step operations.
- Reinforce the use of properties of equality to justify each step in the solution process.

A1.PAFR.2.1

Observation: Students often know procedures associated with linear and quadratic equations but struggle to connect multiple forms of equations to their corresponding features. Students may incorrectly assume that slope is always the coefficient of the x -term and may have difficulty identifying zeros, intercepts, and other features when equations are presented in different forms.

Instructional Recommendations:

- Provide opportunities for students to compare slope-intercept, standard, point-slope, factored, and vertex forms and identify the information that is most easily obtained from each form.
- Engage students in converting among forms and discussing why one form may be more useful than another in a given situation.
- Use graphs, tables, and equations simultaneously so students can connect algebraic structure to graphical features.
- Develop anchor charts that connect equation forms to the features they reveal.

A1.PAFR.2.3

Observation: The committee observed that students were generally more successful when the slope and y -intercept were explicitly given. Performance trends suggest that students may benefit from additional support constructing equations from contextual situations and interpreting the meaning of a zero value within the context of a problem.

Instructional Recommendations:

- Provide opportunities to write equations from contextual situations and connect equations, graphs, and contexts through multiple representations.
- For linear equations in slope-intercept form, ensure students understand that $y=mx$ is the same as $y=mx+0$. These equations have a y -intercept which is zero; reinforce that a constant term of 0 is still a value and that a missing coefficient in front of x indicates a slope of 1. Ensure students understand what those values mean and why they are there. Emphasize what a zero initial value represents in context.
- Expose students to drop-down item types and ensure they complete all selections. Leaving a drop-down menu blank is not the same as selecting a value of 0. Students must actively select “0” when it is the correct response.

A1.PAFR.2.8

Observation: Overall, students were generally successful in solving systems from graphs. However, when presented with a system of quadratic functions, the committee observed that some high-performing students confused the intersection point with the solution(s) to $f(x)=g(x)$, selecting the y-coordinate instead of the x-coordinate which represents the solution.

Instructional Recommendations:

- Provide opportunities for students to solve equations of the form $f(x)=g(x)$ using graphs and explain why the x-coordinate(s) of the intersection(s) represent the solution(s).
- Emphasize that systems may have one solution, multiple solutions, or no solution, depending on the number of intersection points shown on the graph.
- Do a card sort activity that requires matching equal functions with their solutions, where you have a mix of functions given in function notation form and functions where graphs are just given.
- Practice interpreting graphs with and without labeled points, emphasizing how to identify the coordinates needed to answer a given question.

A1.PAFR.2.10

Observation: The committee observed that some students confused linear and exponential growth, struggling to distinguish between equal differences and equal factors over equal intervals.

Instructional Recommendations:

- Use inductive reasoning by encouraging students to describe patterns before introducing terminology.
- Provide examples and nonexamples that require students to classify and justify sequence types. This could be structured into an activity, such as a card sort.
- Teach this indicator together, not in isolation.

Functional Reasoning

A1.PAFR.3.1

Observation: Students seem to memorize function notation procedures without fully understanding the relationship among input, output, independent variables, dependent variables, domain, and range.

Instructional Recommendations:

- Use anchor charts connecting input, output, domain, range, and function notation.
- Connect function notation to graphs, tables, and contexts.
- Provide opportunities to interpret function notation within real-world situations.
- Reinforce vocabulary consistently throughout the year.
- Encourage students to explain function relationships verbally and visually.

A1.PAFR.3.2

Observation: The committee observed that some students excluded 0 from the domain, indicating difficulty recognizing that 0 can be a valid value in the context of a situation.

Instructional Recommendations:

- Connect domain and range to input and output values and provide opportunities to interpret domain and range in context.
- Use multiple representations including tables, graphs, and contexts.
- If a function is only in the first quadrant the initial value can be zero.

A1.PAFR.3.3

Observation: Students recognize some features of quadratic functions but may struggle to identify and interpret maximums, minimums, symmetry, and vertex relationships across different representations.

Instructional Recommendations:

- Explore quadratic features through tables, graphs, and equations.
- Emphasize the relationship between symmetry and the vertex.
- Use investigations that connect leading coefficients to graph behavior.
- Encourage students to explain the meaning of maximum and minimum values in context.
- Use technology to visualize changes to quadratic functions.

A1.PAFR.4.1

Observation: Students often understand procedural rules for transformations but may not fully understand why transformations occur or how changes in parameters affect a function's graph.

Instructional Recommendations:

- Use exploratory activities connecting equations, tables, and graphs.
- Have students investigate the effects of parameter changes.
- Use technology to dynamically examine transformations.
- Encourage generalizations through observation and discussion.
- Connect transformations to parent functions.

A1.PAFR.4.2

Observation: Students struggle to compare and distinguish characteristics of linear and exponential relationships within contextual situations.

Instructional Recommendations:

- Compare linear and exponential growth simultaneously.
- Focus on key vocabulary associated with each relationship type.
- Connect arithmetic and geometric sequences to corresponding function types.
- Use contextual examples requiring classification and justification.
- Provide opportunities to graph and analyze patterns.

A1.PAFR.4.3

Observation: Students may know procedures for finding average rate of change and function features but seem to struggle to connect these ideas across tables, graphs, equations, and contexts.

Instructional Recommendations:

- Connect average rate of change to prior understandings of slope.
- Provide opportunities to calculate and interpret rate of change from tables, graphs, and equations.
- Use anchor charts linking slope formulas and average rate of change.
- Have students identify and compare key features across representations.
- Incorporate error analysis and discussion about common misconceptions.