



EOCEP Algebra 1 2025 Test Data Review Report

Office of Assessment and Standards

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South Carolina Department of Education

Contents

Introduction	1
General Insights and Strategies.....	1
Insights and Strategies by Reporting Category.....	2
Statistical and Geometrical Modeling; Numerical Reasoning	2
Patterns and Algebraic Reasoning.....	3
Functional Reasoning.....	3

Introduction

Data Recognition Corporation and the South Carolina Department of Education Office of Assessment and Standards convened a committee of content experts to review item data from the South Carolina End-of-Course Examination Program (EOCEP) assessment. The committee of educators discussed and analyzed items from the Spring 2025 administration of the EOCEP, including information about how students performed on each item. Based on their analyses, the committee offered the instructional insights and strategies outlined in this document to support student learning.

Test items on Spring 2025 EOCEP Algebra 1 assessment were aligned to the 2015 South Carolina College-and Career-Ready (SC CCR) Math Standards. To be most useful for teachers, all instructional insights and strategies in this document, have been organized based on their alignment to the 2025 SC CCR Math Standards, and new reporting categories.

The committee recognizes the hard work of South Carolina educators and offers these relevant and useful suggestions for improving instruction as an addendum to those from previous years.

General Insights and Strategies

- Revisit content in prior units to prevent isolation of knowledge.
- Encourage students to maintain a notebook from 8th grade to Algebra to make connections with previous concepts.
- Use bell work to pull in previously learned material and reinforce connections.
- Having anchor charts and word walls up during the year are great for reinforcing vocabulary.
- Make it regular practice to give students time to explore and use the Desmos (testing) graphing calculator, along with the online testing tools like the highlighter. Incorporate the [Online Tools Training \(OTT\)](#) throughout the year to help students build confidence and familiarity with the testing platform.
- Include error analysis problems to deepen understanding.
 - Allow students to make mistakes and discuss their reasoning.
 - Let students correct teacher mistakes to engage in active processing.

- Provide sentence starters like: “*I am struggling with ___*” or “*I am having difficulty with ___*” to help initiate participation. This will provide a starting point for the next day's discussion and support students who may be less inclined to speak up.
- Reinforce meaning by tying in math concepts to familiar tools like digital payment platforms or mobile banking apps.
- Expose students to test-style questions with strong incorrect answer choices/ distractors. Practice identifying and eliminating incorrect answer choices.
- Stress that EOCEP Algebra 1 indirectly tests problem-solving and reading. Increase reading load in problems to build perseverance and comprehension. Every problem should not be a simple (solve) problem. Encourage students to slow down and read carefully.

Insights and Strategies by Reporting Category

Please refer to the [EOCEP Algebra 1 Test Blueprint for 2025-26](#) to view the individual indicators grouped in each reporting category.

Statistical and Geometrical Modeling; Numerical Reasoning

- Students appeared to have difficulty identifying limitations in real-world contexts related to standard A1.MGSR.1.1. To support student understanding, teachers might consider the following strategies.
 - Help students with number sense and practice problems with money.
 - Address common misconceptions with rounding.
 - Teach students not to rely solely on what they see on the calculator - focus on interpreting results.
- When translating between rational exponents and radical expressions, expose students to equivalencies (multiple forms), not only the simplified answer.
- For A1.DPSR.2.2,
 - Emphasize that the y-intercept represents the “starting point” in a situation.
 - Provide students with a variety of context-based problems to help them understand this concept in real-world scenarios.
 - Expose to slope intercept form, but not always in that order.
- Teach slope as a rate of change, not just “rise over run”.
- Know what correlation coefficient means – use visuals to enforce this concept.

Patterns and Algebraic Reasoning

- Use highlighting to group like terms together.
- Consider the CUBES problem solving strategy as a structured approach to solve word problems. Even if students initially receive only the final answer without showing their process, they should be required to work backwards to justify their reasoning and reconstruct the original equation.
- Show students examples of literal equations (letters) side by side with regular equations (numbers) to show the same solution process.
- For A1.PAFR.2.2, make the connection from factoring to visual using Desmos. In other words, teach as factoring, set equation to zero, and use Desmos as a checkpoint.
- Teachers need to be familiar with teaching each type of sequence, arithmetic and geometric (A1.PAFR.2.5). Students need a lot of exposure. One strategy is to use the table function in Desmos. Students can use this to graph and explore linear and exponential relationships.
- Support student understanding of A1.PAFR.2.8 by having them graph both manually and using Desmos to reinforce conceptual understanding and accuracy. Ensure students can graph both by hand and technology.

Functional Reasoning

- Clarify for students that the solution to a linear equation is not just a single point, but a line representing all possible solutions; visually show students that each point on the line satisfies the equation. Student responses, even with straightforward questions, indicated a need to reinforce this concept.
- Support student understanding of transformations (A1.PAFR.4.1) by using Desmos to explore changes from parent functions. Over time, students should develop the ability to produce graphs without relying on graphing tools. Encourage discussions that connect the visual features of the graph to the corresponding equation or table of values.
- To support student engagement with transformations, consider using a hands-on strategy where students use a placemat to physically model graph movements with their hands.

- Emphasize function notation and its meaning by consistently using vocabulary such as input and output values. Reinforce these ideas by connecting with students' prior knowledge of “function machines”, where each input produces a corresponding output.
- If polynomials are introduced early in the year, begin using function notation alongside them to increase students' exposure and familiarity with the concept.
- Guide students to observe patterns in the function table before graphing, encouraging discussion about minimum and maximum values and the symmetry of quadratic functions.
- Ask students about the meaning of domain and range using real life scenarios - ask if it makes sense. Ask "What happens if...?" while going through several scenarios. Tie this in with the equation, and then back to the graph.
- Consider using multiple representations when asking for key features. For instance, if students are only given a table of values, you might prompt them to identify the function's minimum and maximum values to deepen their understanding.
- The committee found that students struggled with distinguishing between linear and exponential functions (A1.PAFR.4.2), when they are represented as verbal models or real-world situations. Emphasize the defining characteristics of each function type together within real-world contexts rather than in isolation.