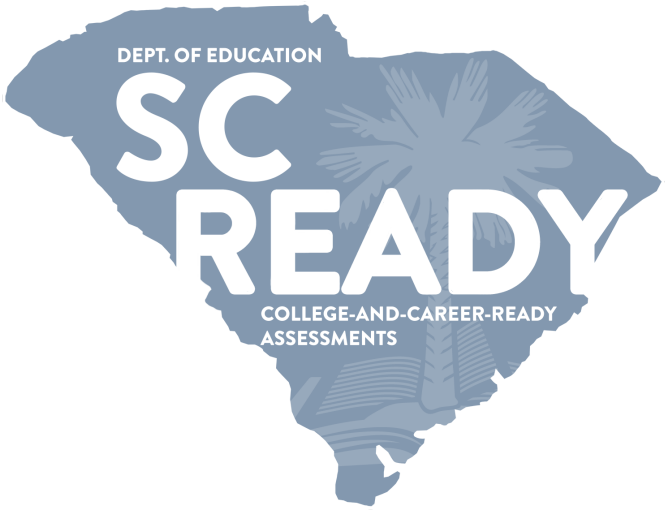
SOUTH CAROLINA
DEPARTMENT OF EDUCATION



SC READY Mathematics Grades 6-8
2025 Test Data Review Report

Office of Assessment and Standards

Updated October 2025

South Carolina Department of Education

Contents

Introduction

Data Recognition Corporation and the South Carolina Department of Education Office of Assessment and Standards (OAS) convened a panel of content experts to review item data from the Spring 2025 administration of SC READY. The panel of content experts analyzed operational and field test items, including information about how students performed on each item. Based on their analyses, the panel offered the instructional insights and strategies outlined in this document to support student learning.

Operational items on the Spring 2025 SC READY Math 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.

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

- Include Special Education and multi-lingual learner teachers with your instructional planning to gain fresh perspectives and better support for all learners.
- Collaborate with the science team at your school to ensure that the same processes and vocabulary are consistent.
- Make sure students are familiar with using the Desmos testing calculators.
- Use the Online Tools Training (OTT) to help students be familiar with the tools on the testing platform.
- Use the appropriate academic vocabulary on a consistent basis.
- Discuss problems through bell ringers. Give students a chance to work through challenging problems that really make them think, such as brain teasers.
- Provide students with high-reading-load problems that challenge them to think deeply, get stuck, and talk through their reasoning.
- Model how to annotate math texts by writing in the margins, highlighting key information, and marking important details. Encourage students to begin this process on paper, then transition to using online tools to reinforce and extend their learning.
- Support productive struggle and guide students in evaluating whether their answers make sense.

Grade 6

Data, Probability, and Statistical Reasoning (DPSR)

- Have students generate their own data to deepen understanding of sample size. Use the class size as a practical example.
- For 6.DPSR.1.3, the committee suggests focusing on academic vocabulary (esp. skewed left/right). Most students chose a distractor that reverses the direction of the skew, which is a common misconception. Use visuals and movement, for e.g. skateboarding or skiing to represent data being skewed left or right based on movement.
- Present different types of data displays and ask students to find the median and mode. Have the students come to their own conclusions on which measure was easiest to find.
- Integrate outliers into data sets.
- When teaching box plots, encourage students to use the "five-number summary" as a strategy. Students can use their hand (even have them draw it): the pinky and thumb represent the lower extreme and upper extreme, the ring and pointer fingers represent Q1 and Q3, and the middle finger represents the median. *(Prior to the 2025 SC CCR Math Standards, this strategy was aligned to a 7th grade indicator*).

Measurement, Geometry, and Spatial Reasoning (MGSR)

- Make the correlation between the fact that a triangle is HALF of a rectangle.
- When finding the area of composite figures, talk with students about what the question is really asking them to find or figure out. Try using strategies that support visual thinking:
    - Use a ruler and graph paper to cut out a composite shape; count the squares to find the area of the individual shapes.
    - Have students use notebook paper to fold and create triangles, helping them see what rectangles are made of.
    - Draw on the shape (dotted lines) and have students remove the unnecessary parts, visually representing subtraction in the solution.
- For surface area and volume, the committee suggests the following:
    - Use solids with nets on the inside or have students bring in boxes. Find the area of each shape and have them cut it open to make observations and ask, what is the same/different. Color code the parts that are the same.

    - Cut out each surface, find the area, then bring back together to see as a net and as a solid.
    - Use accessible terms such as front/back/top/bottom/side before introducing academic vocabulary.
- Understand that opposite sides of the prism are congruent.
- To help students visualize graphing a polygon on a coordinate plane, use hands on resources such as geoboards and pegboards.

Numerical Reasoning (NR)

- Use multiple strategies for teaching GCF, LCM, and prime factorization. Focus on academic vocabulary such as factor and multiple. *(This strategy now aligns with a 5th grade indicator in the 2025 SC CCR Math Standards.)*
- Help students develop fluency with prime numbers to simplify the process of breaking numbers into prime factors. *(This strategy now aligns with a 5th grade indicator in the 2025 SC CCR Math Standards.)*
- When comparing rational numbers, consider teaching the process standards where the focus is on reasoning. Think of logic problems.
- Ensure students understand key terms like absolute value, integers, and rational numbers. *(Prior to the 2025 SC CCR Math Standards, this strategy aligned to a 7th grade indicator)*.
- Include rational numbers in all situations.
- Help students distinguish between opposites and inverses. For example, terms like 'happy/sad' or 'hot/cold' represent opposites - they don't undo each other. In contrast, an inverse operation undoes another (e.g., addition and subtraction are inverses). *(Prior to the 2025 SC CCR Math Standards, this strategy aligned to a 7th grade indicator)*.

Patterns, Algebra, and Functional Reasoning (PAFR)

- For 6.PAFR.2.1, make sure you use academic vocabulary throughout the year. Focus on terms such as (coefficient vs. constant). Spiral this content.
- Expose students to rational numbers even when translating from verbal phrases to algebraic expressions.
- When applying properties:
    - Teach the reasoning behind the properties.
    - Teach the process before introducing numbers.

    - Use multiple strategies, such as an area model when teaching the distributive property.

- Emphasize that distance on a number line is represented by absolute value, which is always non-negative because it measures the space between two numbers. (*Prior to the 2025 SC CCR Math Standards, this strategy aligned to a 7th grade indicator*).

Grade 7

Data, Probability, and Statistical Reasoning (DPSR)

- Integrate outliers into data sets.
- Encourage students to use the "five-number summary" as a strategy to find the interquartile range. Students can use their hand (even have them draw it): the pinky and thumb represent the lower extreme and upper extreme, the ring and pointer fingers represent Q1 and Q3, and the middle finger represents the median.
- The committee suggests that students should see probability with multiple representations such as lists, tables, and diagrams. Go beyond just solving and calculating. Ensure students are also interpreting their answers.
- Focus on academic vocabulary (esp. skewed left/right). Most students chose a distractor that reverses the direction of the skew, which is a common misconception. Use visuals and movement, for e.g. skateboarding or skiing to represent data being skewed left or right based on movement. *(Prior to the 2025 SC CCR Math Standards, this strategy was only aligned to a 6th grade indicator)*.

Measurement, Geometry, and Spatial Reasoning (MGSR)

- When teaching scale drawings, use proportions and scale factors to solve for either the actual size or the scaled size. Encourage students to explore different strategies.
- Since 7.MGSR.1.2 is heavy in vocabulary, use labels, diagrams, and pictures. Students need to work on showing relationships.
- To help students visualize circumference, use string to physically wrap around circular objects. Encourage them to persevere through word problems involving circumference and area.
- Show students multiple representations of the value of π, such as, exact answers, approximations using values like 3.14, 22/7, or an estimation of 3. Emphasize that the π symbol should remain in the answer when expressing it as an exact answer.
- Incorporate angle relationships into your equations unit; use rational numbers in the equations.

Numerical Reasoning (NR)

- Stress the meaning of open vs closed circles when graphing inequalities on a number line. Use the number line in the OTT.

- When representing inequality statements, have students make sense of the solutions in the situation. For example, ask what it means when something is described as no more than.
- When comparing rational numbers such as fractions, use multiple strategies such as using fraction tiles or finding a common denominator to help students make comparisons.

Patterns, Algebra, and Functional Reasoning (PAFR)

- Ensure students understand key terms like absolute value, integers, and rational numbers.
- Help students distinguish between opposites and inverses. For example, terms like 'happy/sad' or 'hot/cold' represent opposites - they don't undo each other. In contrast, an inverse operation undoes another (e.g., addition and subtraction are inverses).
- Encourage strategies like color coding and circling signs to break down linear expressions (7.PAFR.3.2). Make sure each part of the expression is highlighted because everything is important.
- Expose students to linear expressions with division represented horizontally, not just vertically. For example: $(y + z) \div (1.75y + 3.75z)$.

Grade 8

Data, Probability, and Statistical Reasoning (DPSR)

- When working with scatterplots, have students identify key information and distinguish it from irrelevant details. This helps them focus on what's truly needed to interpret the data accurately (8.DPSR.1.1).
- For 8.DPSR.2.2 teach compound probability using multiple models (lists, tables, and diagrams). Extend by teaching how to add the probabilities together, without the models. (*Prior to the 2025 SC CCR Math Standards, this strategy was aligned to a 7th grade standard).*

Measurement, Geometry, and Spatial Reasoning (MGSR)

- Encourage students to get into the habit of drawing and labeling their own figures when not provided with a problem.
- Teach students how to label similar and congruent figures.
- Use prior knowledge of proportional relationships when working similar figures.

Numerical Reasoning (NR)

- When working with decimal expansions of repeating fractions - such as 1/3 or 5/6, that have been rounded, ensure students understand that these are approximations, not exact values (8.NR.1.1).
- Ensure students practice saying the decimal form of rational numbers with the place value in mind - not "zero point three" or "point three" rather, "three tenths".
- Ask students to justify why a number is irrational/rational. Have small group discussions or debates on why or why not and have them explain.
- Expose students to numbers that "look" irrational, for e.g. square roots of perfect squares with a fraction/decimal under the radical sign.

Patterns, Algebra, and Functional Reasoning (PAFR)

- Encourage use of strategies such as the vertical line test when determining if a graph is a function. Help students understand the reasoning that explains why this strategy works.
- Ensure students can find the rate of change of a function from multiple representations, such as a table.
- Reinforce vocabulary like "constant rate of change" when discussing linear functions and justifying reasoning.

- Remind students that curved graphs are nonlinear because they lack a constant rate of change. Use clear examples and non-examples to support understanding.
- When teaching slope, encourage students to label the coordinates first. This helps prevent common mistakes, like reversing the order when calculating the change in y over the change in x.