

2021

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# SC MATHEMATICS ACADEMIC STANDARDS CYCLICAL REVIEW

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**APPROVED BY**  
ACADEMIC STANDARDS &  
ASSESSMENT SUBCOMMITTEE  
November 2021

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DECEMBER 2021

# EOC RECOMMENDATIONS

## RECOMMENDATION 1

The number of mathematics standards at each grade level/course should be reduced and prioritized to allow for greater depth. A document should also be created to show how the various standards align vertically across grade levels. These revisions to the South Carolina Mathematics Standards (K-12) should be reviewed against the lens of the National Council of Teachers of Mathematics (NCTM) Catalyzing Change documents. These documents have distilled the essential content and skills for grade level mathematics and high school mathematics courses. The documents can assist in prioritizing standards, allowing more time with fewer standards in a given school year, and articulating standards progressively through the grade levels.

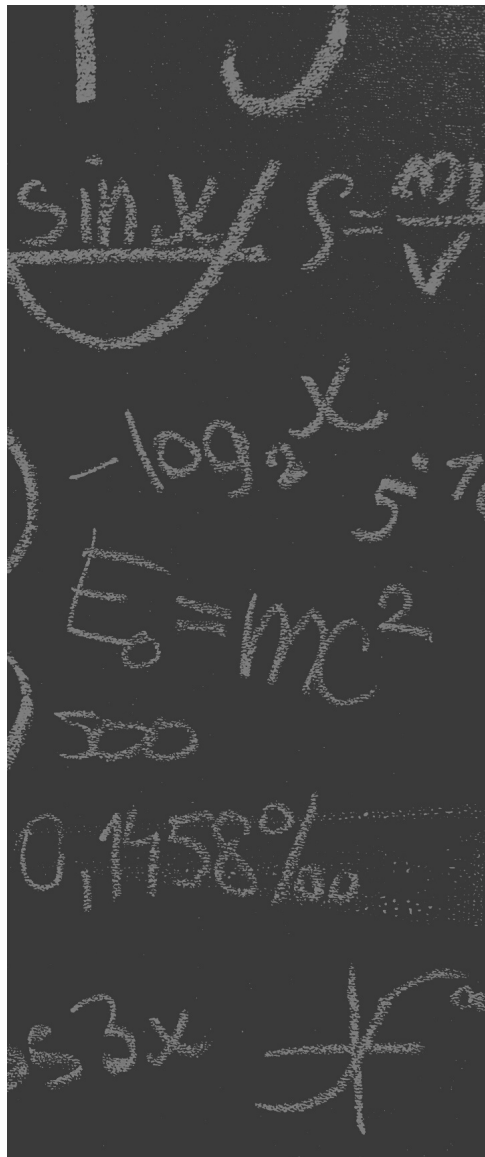
## RECOMMENDATION 2

Consider the use of defining language when using “standards algorithm” and include other strategies for students to solve problems.

## RECOMMENDATION 3

For students in advanced middle grade math classes, care should be taken to include mastery of geometry and measurement, data analysis and statistics/probability as these topics are important for success in high school mathematics.

A math standards document should be created for classes in which students are taking Algebra I while also responsible for a SC READY mathematics assessment. The document should integrate both the Algebra I and grade level standards (e.g. Algebra I and grade 8 standards). This document would support students in achieving deeper mathematical understanding and provide clearer guidance to teachers.



# EOC RECOMMENDATIONS

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**RECOMMENDATION 4**

The South Carolina Process Standards should be reviewed against national and international process skill frameworks such as the Mathematical Practices in 2025 NAEP Mathematics Framework and the 2021 PISA Mathematics Framework. The intent and meaning of the process skills needs to be clarified for teachers to explicitly show the connection between the intent of the process skills and math content. The process skills should be embedded in the content standards.

**RECOMMENDATION 5**

Several issues were raised among the national and state panels regarding high school mathematics courses, both in sequence and content. Recommendations for changes to content and sequence are:

a) Algebra I can currently be taught by subdividing the content between two courses: Algebra Foundations and Intermediate Algebra. Students should instead receive one (1) Algebra I math credit upon successful completion of Intermediate Algebra. Algebra Foundations should become elective credit only. By doing this, students will have the opportunity to enroll in up to three additional math courses while in high school. In order to ensure greater equality for all students, it is also recommended that the Foundations of Algebra and Intermediate Algebra should be taught in one school year: either semester 1 and semester 2 on a block schedule or as two courses running simultaneously on a 7-period day schedule.

b) Alternate pathways for high school math course sequences should be considered. Alabama has recently realigned its course sequence and requires all students as freshmen to enroll in Geometry/Data Analysis. See Appendix A.

c) Standards for statistical literacy in high school are almost all limited to the Probability and Statistics course. Many students do not take this course in high school and thus are not exposed to these mathematics concepts. Some of the graduation standards are included in the course. The SDE should use the Gaise Report II in developing a data science course. If a data science course is not required in the high school math sequence, then standards of data science should be included in the math courses in a high school sequence. See Appendix A.

# EOC RECOMMENDATIONS

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## **RECOMMENDATION 6**

Most of the math standards focus on knowledge and comprehension. In the revision process, math standards that ask for explanations, justifications, interpretations, and applications should be included to raise the cognitive level. Students should be required to explain and justify answers orally and in writing using mathematical language. The recommendation for student responses should be included in the assessment design. In addition, where appropriate, performance-based items should be considered as part of the mathematics state assessment.

## **RECOMMENDATION 7**

Revisions to the mathematics standards should include combining or clearly linking the key concepts/standards and support documents so that teachers have a single authoritative source for planning and assessments.

## **RECOMMENDATION 8**

The role of technology should be made more prominent in the standards and specific examples should be provided.

## **RECOMMENDATION 9**

Standards should include more concrete examples for teachers such as referencing number lines, models, manipulatives, etc.

## **RECOMMENDATION 10**

Standards need to include more real-world examples for making mathematics relevant.

## **RECOMMENDATION 11**

Standards should be written in teacher friendly language.

## **RECOMMENDATION 12**

Standards should show consistency and continuity in math language and K-12 vocabulary.

## **RECOMMENDATION 13**

A copyeditor should be used to ensure the standards document is clear, concise and consistent for teacher-readability as well for the expectations for student learning.

# THE REVIEW

The South Carolina Education Accountability Act of 1998 establishes an accountability system for public education that focuses on improving teaching and learning so that students are equipped with a strong foundation in the four primary academic disciplines and a strong belief in lifelong learning. Academic standards are used to focus schools and districts toward higher performance by aligning the state assessments to those standards. The implementation of quality standards in classrooms across South Carolina is dependent upon systematic review of adopted standards, focused teacher development, strong instructional practices, and a high level of student engagement.

**Pursuant to Section 59-18-350(A) of the Education Accountability Act, the Education Oversight Committee (EOC) and the State Board of Education (SBE) are responsible for reviewing South Carolina's standards and assessments to ensure that high expectations for teaching and learning are being maintained.**

**The State Board of Education, in consultation with the Education Oversight Committee, shall provide for a cyclical review by academic area of the state standards and assessments to ensure that the standards and assessments are maintaining high expectations for learning and teaching. At a minimum, each academic area should be reviewed and updated every seven years. After each academic area is reviewed, a report on the recommended revisions must be presented to the Education Oversight Committee and the State Board of Education for consideration. After approval by the Education Oversight Committee and the State Board of Education, the recommendations may be implemented. However, the previous content standards shall remain in effect until approval has been given by both entities. As a part of the review, a task force of parents, business and industry persons, community leaders, and educators, to include special education teachers, shall examine the standards and assessment system to determine rigor and relevancy.**

## MATHEMATICS ACADEMIC STANDARDS CYCLICAL REVIEW

In October 2021, the EOC completed the cyclical review of the 2015 South Carolina College- and Career Ready Standards for Mathematics that was adopted in March 2015. This document provides recommendations from the EOC for modifications to the 2015 mathematics standards. The recommendations were compiled under the advisement of two review teams: a national review team of educators who have worked with national or other state organizations and a state committee composed of parents, business/community representatives, mathematics educators, and teachers of English Language Learners and exceptional education students. The state team was composed of individuals from various geographical areas across South Carolina.

It is important to note that the state adopted 2015 South Carolina College- and Career Ready Standards for Mathematics represent the work of many educators, and that this review of the standards was undertaken to identify ways in which their work could be strengthened and supported. The EOC expresses its appreciation to those educators and commends their utilization of national documents and their belief in the achievement of all students. The EOC intends to enhance the work of school level educators and, ultimately, to ensure that all students are provided the opportunity to experience the breath and depth of the specific discipline.

### **Cyclical Review Process**

The review of the 2015 South Carolina College- and Career Ready Standards for Mathematics began with a focus on the accomplishment of goals articulated in the Education Accountability Act (EAA) of 1998. The law, as amended in 2008, specifies: "The standards must be reflective of the highest level of academic skills with rigor necessary to improve the curriculum and instruction in South Carolina's schools so that students are encouraged to learn at unprecedented levels and must be reflective of the highest level of academic skills at each grade level." (Article 3, 59-18-300)

The Standard Operating Procedures for the Review of Standards (SOP) agreed upon by the State Department of Education (SDE) and the EOC during the summer 2016 were followed for this review. A timeline established during the spring of 2021 outlined the timeframe in which the required review teams were to review the 2015 standards by the end of the year 2021. The SOP also outlines the steps to be taken to revise the current standards should the completion of the reviews indicate that revision is needed.

The recommendations for revisions to the 2015 South Carolina College- and Career Ready Standards for Mathematics, as approved by the EOC, will be submitted to the South Carolina Department of Education (SDE) for consideration in any proposed revisions of the standards.



## Criteria Descriptions

The standards review process emphasized the application of the criteria addressing comprehensiveness/balance, rigor, measurability, manageability, and organization/ communication. SDE representatives, district and university curriculum leaders, and EOC staff collaborated to identify the standards review criteria in 2003. Decisions on the criteria to be used were based on a comprehensive review of professional literature, and the goals for the standards review as specified in the Education Accountability Act of 1998. The identified criteria were each applied through the two review panels: (1) leaders in the discipline and/or cognitive processes drawn from across the nation and (2) mathematics educators; teachers of English Language Learners and exceptional education students; parents; business representatives; and community leaders. The criteria are:

### Criterion One: Comprehensiveness/Balance

The criterion category for Comprehensiveness/Balance is an evaluation of how helpful the 2015 South Carolina College-and Career Ready Standards for Mathematics are to educators in designing a coherent curriculum. The criterion is directed at finding evidence that the standards document clearly communicates what constitutes mathematics content, that is, what all students should know and be able to do in mathematics by the time they graduate. The criterion includes consideration of the following areas:

- The standards address essential content and skills of math;
- The standards are aligned across grades as appropriate for content and skills;
- The standards have an appropriate balance of the content and skills needed for mastery of each area in math; and
- The standards reflect diversity (especially for ethnicity and gender) as appropriate for the subject area.

### Criterion Two: Rigor

This criterion calls for standards that require students to use thinking and problem-solving skills that go beyond knowledge and comprehension. Standards meeting this criterion require students to perform at both national and international benchmark levels.

- Standards should focus on cognitive content and skills (not affect);
- Standards should be developmentally appropriate for the grade level;
- Standards should include a sufficient number of standards that require application of learning (application, analysis, synthesis, and evaluation);
- Standards should be informed by the content and skills in national and international standards; and,
- Standards should be written at a level of specificity that would best inform instruction for each grade level.

**Criterion Three: Measurability**

Knowledge and skills presented in the standards are assessable for school, district and state accountability. The primary element of measurability is:

- The content and skills presented in the standards should be assessable (are observable and demonstrable).

**Criterion Four: Manageability**

This criterion applies to instructional feasibility, that is, whether the complete set of mathematics standards at a particular grade level can reasonably be taught and learned in the class time allotted during one year. The primary element of manageability is:

- The number and scope of the standards for each grade level should be realistic for teaching, learning, and student mastery within the academic year.

**Criterion Five: Organization/Communication**

The Organization/Communication criterion category stipulates that the expectations for students are to be clearly written and organized in a manner understandable to all audiences and by teachers, curriculum developers, and assessment writers. Organization includes the following components:

- The content and skills in the standards should be organized in a way that is easy for teachers to understand and follow;
- The format and wording should be consistent across grades;
- The expectations for student learning should be clearly and precisely stated for each grade; and,
- The standards should use the appropriate terminology of the field but be as jargon free as possible.

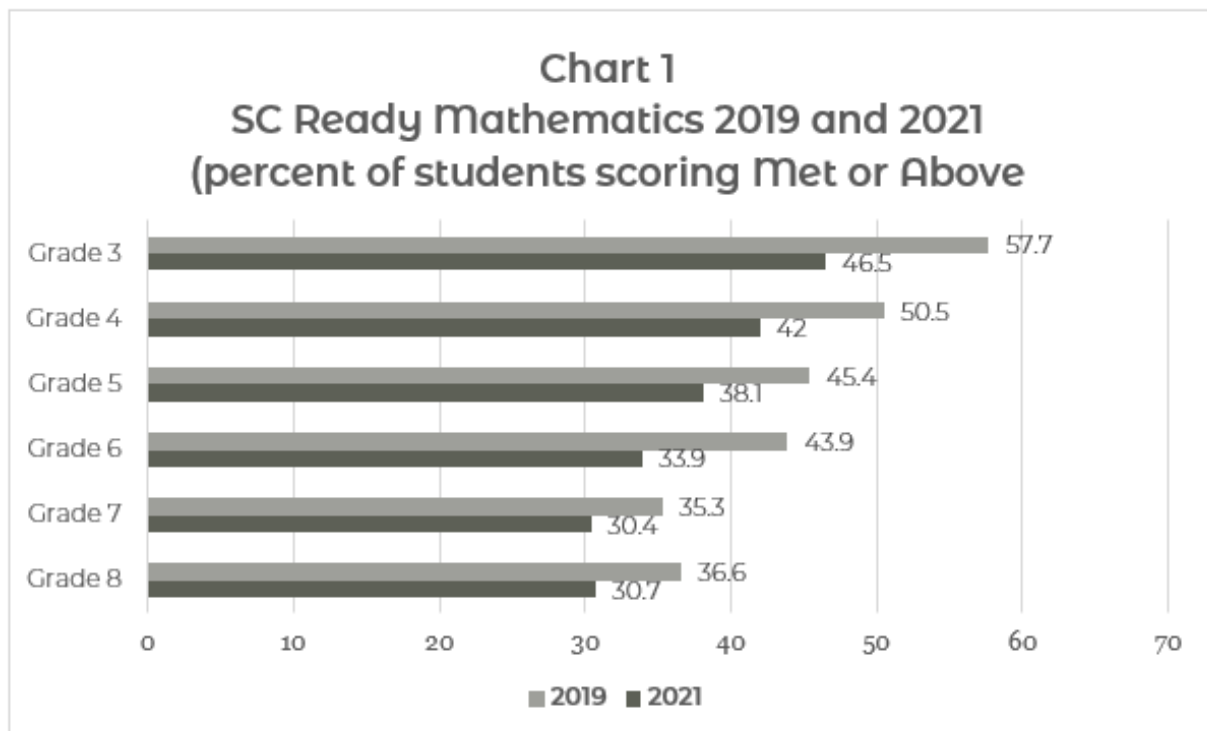


# SC MATHEMATICS STUDENT PERFORMANCE

The 2015 South Carolina College-and Career Ready Standards for Mathematics were adapted using national frameworks for mathematics and followed a similar process to what is outlined in the Standards Operating Procedure. Since the standards provide the foundation for the assessment of student learning which occurs following the teaching of the standards, a thorough review should include an evaluation of student performance. Unfortunately, too few students in South Carolina have reached the grade level expectations in Mathematics. this fact was exacerbated during the pandemic.

Of particular concern is the decrease in the percentage of African American students who did not met standards in 2019 and 2021. In elementary/middle grades only 15.3 percent met grade level standards and in high school only 15.4 percent of African American students met grade level standards. Of equal concern is the drop in scores for Limited English Language students from 41.1 percent to 13.7 percent (a decrease of 27.4 percentage points) in high school.

Chart 1 documents the percentage of students scoring Met and Above on the SC Ready assessment for grades 3-8 in 2019 and 2021.



# SC MATHEMATICS STUDENT PERFORMANCE

Chart 2 shows the same data by subgroups of students across all grade levels.

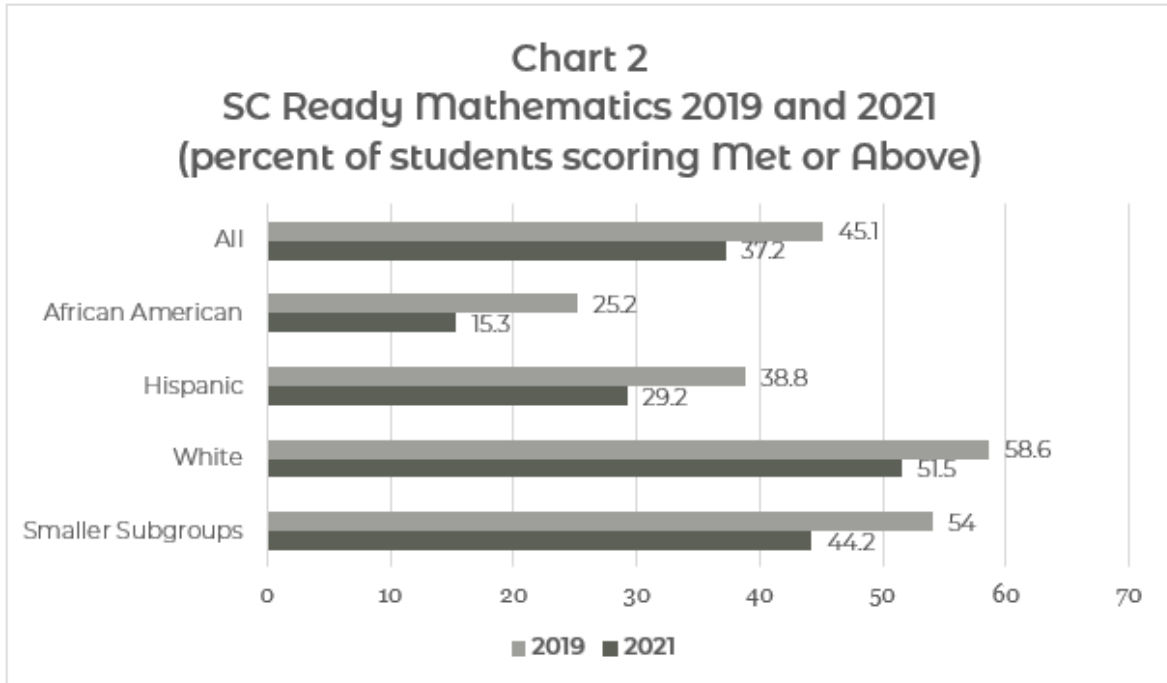
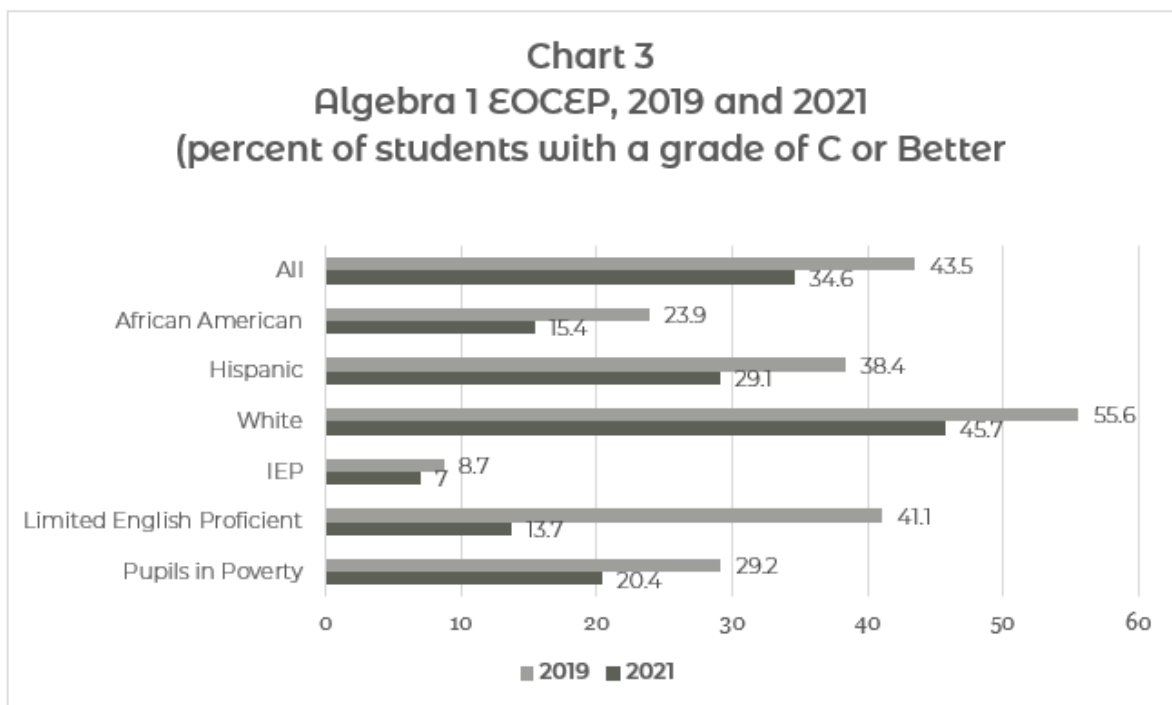


Chart 3 shows students scoring a “C” or better on the End-of-Course test in Algebra 1 for all students in 2019 and 2021 and by subgroups in 2019 and 2021



# NATIONAL PANEL MEMBERSHIP

The EOC’s cyclical review of the 2015 South Carolina College-and Career Ready Standards for Mathematics was conducted from April 2021 to October 2021. The national review was conducted in April and May 2021. The state review was conducted in September and October 2021.

The national review team members consisted of recognized leaders in education that have participated in the review/development/writing of national and state standards and/or development of cognitive processes. Materials shared as part of the national review included 2019 and 2021 SC READY and End-of-Course student performance in mathematics, the Revision of Bloom’s Taxonomy of Educational Objectives, and the Profile of the South Carolina Graduate. Members of the team received the materials for the review in early April and continued their review process through May. After an independent review period, the members of the panel participated in a telephone conference call in May, which produced a set of findings listed later in this document.

## **NATIONAL PANEL:**

- **Dr. Nicholas Cluster,  
Assistant Professor,  
South Carolina State  
University**
- **Dr. Ed Dickey,  
Distinguished Professor  
Emeritus, University of  
South Carolina**
- **Dr. Renee Jefferson,  
Professor, The Citadel**
- **Dr. Karen Karp,  
Professor, Johns  
Hopkins University**
- **Dr. DeAnn Huinker,  
Professor, University  
Wisconsin**

# NATIONAL PANEL COMMENDATIONS

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## **COMMENDATION 1**

Overall, the reviewers noted standards address essential content and skills of mathematics.

## **COMMENDATION 2**

The vertical progression of content and skills in middle school standards (grades 6-8) is accomplished.

## **COMMENDATION 3**

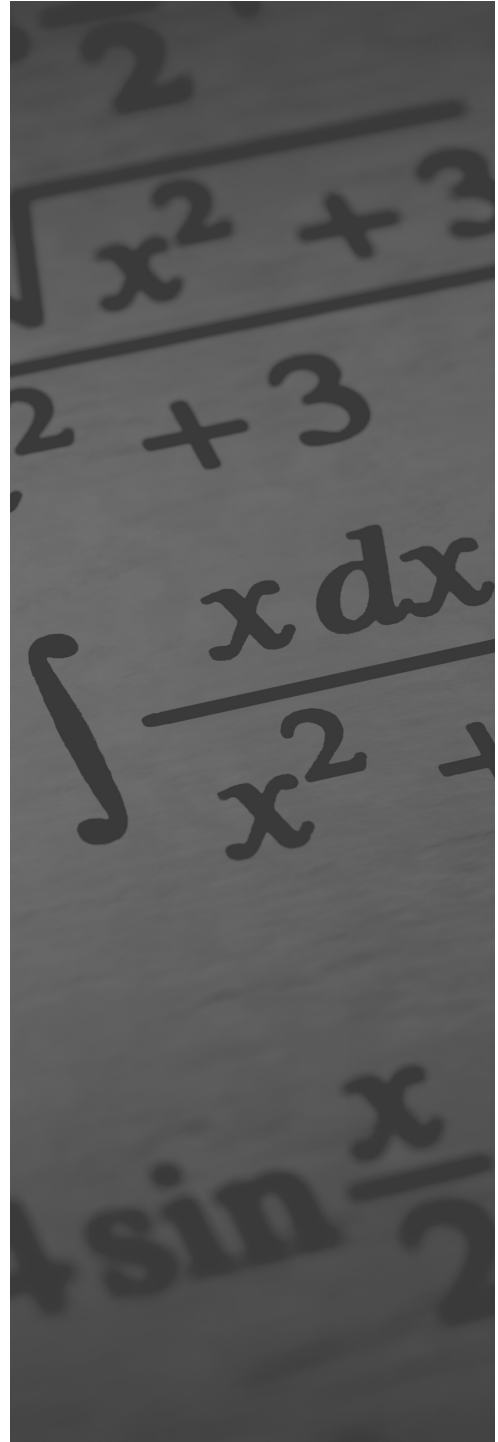
Some standards require students to demonstrate learning at higher levels of Revised Bloom's taxonomy.

## **COMMENDATION 4**

The standards appear to be of consistent style and formatting.

## **COMMENDATION 5**

Calculus course is well organized and specific as to student learning.



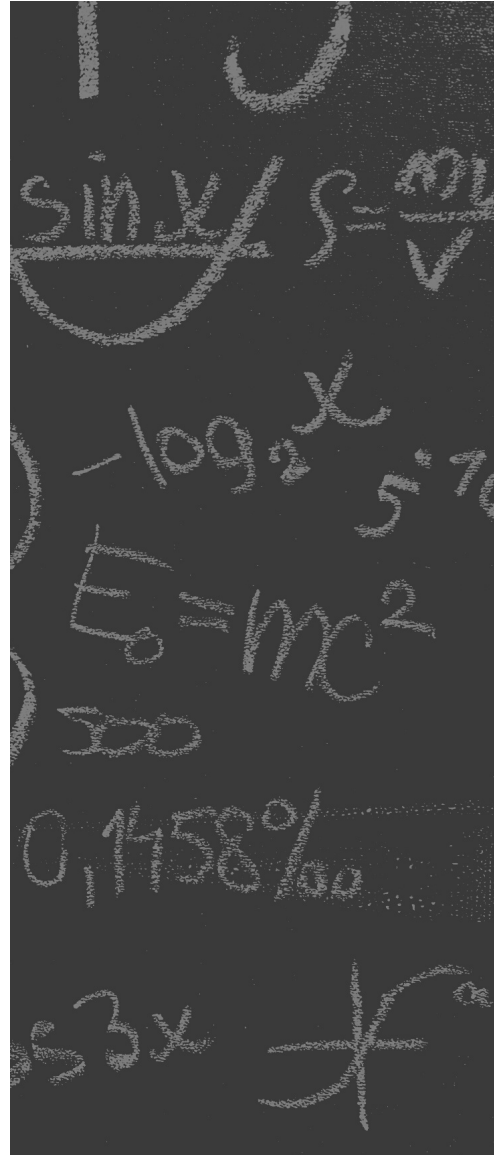
# NATIONAL PANEL FINDINGS

**FINDING 1**

Revisions to the South Carolina College and Career Ready Standards (K-12) should be reviewed against the lens of the National Council of Teachers of Mathematics (NCTM) Catalyzing Change documents.

**FINDING 2**

The standards should include statistical thinking in all grades. Currently, in elementary and middle grades there is too much emphasis on data displays as end products and not enough on supporting the development of content/skills that are the foundation of statistical thinking. By third grade, students should have an introduction to the investigative process (i.e., formulate a statistical investigative question, collect data, analyze data and interpret data) as recommended by GAISE II, 2020. Currently, students can graduate with little exposure to the content/skills in statistical thinking. The guidelines for data science thinking should be included in a math course sequence for all high school students

**FINDING 3**

Consider changing language of using “standards algorithm” to include other strategies for students to solve problems.

**FINDING 4**

For students in advanced middle grade math classes, care should be taken to include mastery of geometry and measurement, data analysis and statistics/probability as these topics are important for success in high school mathematics and college and career.

# NATIONAL PANEL FINDINGS

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**FINDING 5**

The South Carolina Process Standards should be reviewed against a national and international process skill framework such as the Mathematical Practices in the 2025 NAEP Mathematics Framework and the 2021 PISA Mathematics Framework. The intent and meaning of the process skills needs to be clarified for teachers to explicitly show the connection between the intent of the process skills and content.

**FINDING 6**

Algebra I standards place an inordinate emphasis on algebraic symbol manipulation. Consider reviewing NCTM Catalyzing Changes in High School Mathematics essential concepts for Algebra I to distill those standards, which are essential to the content for Algebra I.

**FINDING 7**

To ensure greater equality and access for all students, the Foundation of Algebra and Intermediate Algebra should be eliminated, and all students only offered Algebra I. These two courses currently allow students, primarily those with low math skills, to obtain credit for Algebra I over a two-year period. As a result, these students only have the opportunity of two (2) years (instead of three) of high school to obtain math skills at higher levels.

**FINDING 8**

Alternate pathways for high school math course sequences should be considered. Alabama has recently realigned its course sequence and required all students as freshmen to enroll in Geometry/Data Analysis. See Appendix A.

**FINDING 9**

Standards are aligned in the elementary grades; however, the standards do not build upon one another to develop a deeper understanding of mathematical concepts/ideas or to develop a more complex application of concepts/ideas. Rather as the elementary standards progress through the grade levels, students are asked to simply add larger numbers or for students to work with or move from 2-digit to 3-digit manipulation.

**FINDING 10**

Elementary standards (K-5) overemphasize skills rather than conceptual learning. Revisions should consider the inclusion of real-world problems/situations, especially in geometry and measurement/data.

# NATIONAL PANEL FINDINGS

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## **FINDING 11**

The alignment from grade 5 to grade 6 should be reviewed. Student learning expectations are greatly increased in grade 6 with the introduction of new math concepts and greater complexity. Grade 5 should include an introduction to build on these new concepts.

## **FINDING 12**

The majority of the math standards focus on knowledge and comprehension. In the revision process, asking for explanations, justifications, interpretations, and applications should raise the cognitive level. In addition, students should be required to explain and justify answers orally and in writing using mathematical language. The recommendation for writing should be included in the assessment design.

## **FINDING 13**

Standards should be limited to and prioritize essential skills at each grade level/course in order for teachers to be able to adequately address the depth of mathematical knowledge in a given school year.



# STATE PANEL MEMBERSHIP

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For the state panel review, the EOC contacted all school district superintendents and instructional leaders in the state as well as the members of S.C. Senate Education and House Education Committees. The EOC and South Carolina State Board of Education members were also invited to submit nominations for the state review panel. Approximately 154 names were submitted to the EOC. The state review panel consisted of 35 individuals representing mathematics teachers, teachers of English Language Learners and exceptional education, parents, representatives of business/industry and community members. Also, in attendance, as observers, were representatives from the South Carolina Department of Education's (SDE) Division of Standards and Learning. The state panel conducted its review virtually via Zoom.

The panel members worked over three days to compose individual responses to the standards review and then develop consensus as a group on a set of findings listed later in this document. This process was conducted by having individuals placed in one of three teams each reviewing standards from either elementary, middle or high school. The panel used as reference materials 2019 and 2021 SC Ready and End of Course student performance in mathematics, the Revision of Bloom's Taxonomy of Educational Objectives, and the Profile of the South Carolina Graduate. The state panel reviews were conducted September 13, 27 and October 4, 2021. Rainey Knight, EOC Director of Strategic Innovation, facilitated the review process. The task force reached consensus on insights and specific recommendations about the 2015 South Carolina College-and Career Ready Standards for Mathematics.

# STATE PANEL FINDINGS

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**FINDING 1**

The Process Skills for Mathematics should be revised using a national perspective such as the Mathematical Practices in the 2025 NAEP Mathematics Framework. Process skills should be embedded in the standards.

**FINDING 2**

The standards and indicators should be measurable and clearly articulate the expectations for student learning and results. Teachers should have no doubt as to what should be taught or what students should be able to do as a result (e.g. 6PR3.f, 8FId, ASE2, A.NRNS.3 A1.NQ.1, and A2.ASE.3)

**FINDING 3**

The standards and indicators need to be refined so that they are manageable and measurable in a year-long course. Of particular concern noted was Algebra I course, fifth grade and sixth grade.

**FINDING 4**

Revisions to the Mathematics standards should include combining or clearly linking the key concepts/standards and support documents so that teachers have a single authoritative source for planning and assessments.

**FINDING 5**

The role of technology should be more prominent in the standards and specific examples should be provided.

**FINDING 6**

Standards should include more concrete examples for teachers such as referencing number lines, models, manipulatives, etc.



# STATE PANEL FINDINGS

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## **FINDING 7**

Any revision process should include a focus on creating robust support documents to include the following recommendations:

- a) Provide examples or guidance regarding how a particular standard or indicator might be assessed at grade level.
- b) Release test items no longer used in test forms for SC Ready and End-of-Course.
- c) Explicitly define terms used in the standards. Many of the terms are vague or used interchangeably or imprecisely in the field. Creating a set of shared South Carolina definitions would ensure that educators are talking about the same content/skill.

## **FINDING 8**

A review should include a close examination of standards that could be deleted and/or combined (e.g., ATO.4 & ATO.8; ATO.5).

## **FINDING 9**

Standards and/or support documents need to include more real-world examples for making mathematics relevant.

## **FINDING 10**

Standards need to be more specific as to what a standards algorithmic approach looks like as well as provide opportunities for students to use a variety of strategies to solve a problem.

## **FINDING 11**

Standards for statistical literacy in high school are almost all limited to the Probability and Statistics course. Many students do not take this course in high school and thus are not exposed to these mathematics concepts. Some of the graduation standards are included in the course. The SDE should use the Gaise II Report in developing a data science course. If a data science course is not required in the high school math sequence, then standards of data science should be included in the math courses in a high school sequence.

# STATE PANEL FINDINGS

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**FINDING 12**

Some standards are not written in teacher friendly language (e.g., PC.FBF.4, and PC.AR.EI8).

**FINDING 13**

Standards should be revised for consistency and continuity in math language and K-12 vocabulary.

**FINDING 14**

Assessments in math should include students justifying their answers in written form as well as introducing performance tasks as appropriate.

**FINDING 15**

Additional time to teach math was a concern among all grade levels.

**FINDING 16**

The high school math course sequence should be revised to include:

- a) the elimination of Algebra Foundations and Intermediate Algebra for purposes of equity and opportunity access for all students, and
- b) a data science course in the sequence of courses for students not on pathway to Calculus. See Appendix A.

# STATE PANEL

NAME	COUNTY/ DISTRICT	POSITION
Nikki Cassidy	Chesterfield	Parent, Community
Suzanne Mercer-Clardy	Beaufort	Business/Industry
Stewart Cooper	Lexington	Parent, Business
Ketara Daniels	Orangeburg	Teacher
Christy Everett	Horry	Parent, Business
Maja Fall	Gaffney	Parent
Eileen Fleming-Patonay	Horry	Business/Industry
Natasha Green	Lexington Richland 5	Parent, Teacher
Susan Garmendia	Pickens	Teacher
Rebecca Gunnlaugsson	Kershaw	Parent, Business
Jessie Hamm	York School District 3	Parent, Teacher
Jennifer Heilbronn-Johnson	York School District 4	Teacher
Robert Hucks	Horry	Parent, Business
Tanika Johnson	Lexington Richland 5	Teacher
Lukas Hopper	York School District 3	Parent, Teacher

# STATE PANEL

NAME	COUNTY/ DISTRICT	POSITION
Rachel Jones	Pickens	Exceptional Education Teacher
Rhonda Jordon	Chesterfield	Parent, Business
Shaunta Mack	Williamsburg	Parent, Teacher
Ozell Newman	Horry	Parent, Community
Amanda Painter	Gaffney	Community
Lori Ricard	Newberry	Teacher
Tacadra Rountree	Lexington Richland 5	Teacher, English Language
Valerie Sawyer	Darlington	Teacher, English Language
Christopher Skipper	Horry	Teacher
Jodie Srutek	Beaufort	Parent
Beth Sidwell	York School District 4	Teacher
Khaleelah Stroman	Aiken	Parent, Teacher
Dr. Ben Sinwell	Anderson School District 4	Parent, Teacher
Kimberly Smith	Beaufort	Teacher
Sheela Tarangapadi-Narayanan	Williamsburg	Teacher

# STATE PANEL

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NAME	COUNTY/ DISTRICT	POSITION
Brittany Terry	York School District 3	Parent, Teacher
Sharon Thornwell	Georgetown	Teacher
Dr. Jennifer Wise	Lexington 2	Teacher
Charles Watson	Chesterfield	Parent, Business
Lisa-Anne Williams	York School District 3	Parent, Teacher



# THE MATH STANDARDS DOCUMENT

The 2015 South Carolina College-and Career Ready Standards for Mathematics are organized by grade levels for grades kindergarten through twelfth grade to include standards and key concepts.

The South Carolina Department of Education describes the standards as the culminating outcomes that describe what students should know and be able to do when they leave our public school system.

Each grade level and course is divided into key concepts that organize the content into broad categories of related standards. Neither the order of key concepts nor the order of individual standards within a key concept is intended to prescribe an instructional sequence.

The content standards and the process standards work together to enable all students to develop the world-class knowledge, skills, and life and career characteristics identified in the Profile of the South Carolina Graduate as outlined below.

- Knowledge is supported by the rigorous K - 12 grade level and course content standards,
- Skills are identified in the SCCCR Mathematical Process Standards, and
- Life and career characteristics are identified in the South Carolina Portrait of a College- and Career- Ready Mathematics Student.

## AN EXAMPLE THIRD GRADE MATHEMATICS STANDARD

KEY CONCEPT	STANDARD
NUMBER SENSE-FRACTIONS	<p><b>The student will:</b></p> <p>3.NF.1 Develop an understanding of fractions (i.e., denominators 2,3,4,6,8,10) as numbers.</p> <p>a. a fraction <math>1/b</math> (called a unit fraction) is the quantity formed by one part when a whole is partitioned into <math>b</math> equal parts;</p> <p>b. fraction equivalence can be represented using set, area, and linear models;</p> <p>c. whole numbers can be written as fractions eg, <math>4 = 4/1</math> and <math>1 = 4/4</math>;</p> <p>d. fractions with the same dominator or numerator can be compared by reasoning their size based on the same whole number</p>

# APPENDIX A

Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Grade 7 Mathematics	Grade 8 Mathematics	Geometry with Data Analysis	Algebra I with Probability	Algebra II with Statistics	Specialized course
Grade 7 Mathematics OR Accelerated Grade 7 Mathematics	Grade 8 Mathematics	Geometry with Data Analysis AND Algebra I with Probability (concurrently)	Algebra II with Statistics	Precalculus	AP Calculus OR Additional specialized course
Accelerated Grade 7 Mathematics	Accelerated Grade 8 Mathematics	Geometry with Data Analysis	Algebra II with Statistics	Precalculus	AP Calculus OR Additional specialized course
Accelerated Grade 7 Mathematics	Grade 8 Mathematics OR Accelerated Grade 8 Mathematics	Geometry with Data Analysis	Algebra I with Probability	Mathematical Modeling OR Applications of Finite Mathematics	Precalculus OR Other additional specialized course

Source: 2019 Alabama Course of Study Mathematics (<https://www.alsde.edu/sec/sct/COS/2019%20Alabama%20Course%20of%20Study%20Mathematics.pdf>) that includes accelerated courses for grades 7 and 8, a Geometry with Data Analysis course required for ALL grade 9 students in high school followed by a "Algebra I with Probability" OR "Algebra II with Statistics" course in grade 10 and then multiple options for grades 11 and 12.

# MATHEMATICS ACADEMIC STANDARDS CYCLICAL REVIEW

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## **SOUTH CAROLINA EDUCATION OVERSIGHT COMMITTEE**

The SC Education Oversight Committee is an independent, non-partisan group made up of 18 educators, business persons, and elected leaders. Created in 1998, the committee is dedicated to reporting facts, measuring change, and promoting progress within South Carolina's education system.

## **ADDITIONAL INFORMATION**

If you have questions, please contact the Education Oversight Committee (EOC) staff for additional information. The phone number is 803.734.6148. Also, please visit the EOC website at [www.eoc.sc.gov](http://www.eoc.sc.gov) for additional resources.

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**DECEMBER 2021**