

Family Friendly Math

GUIDE FOR ALGEBRA I

Log on to the [SC Department of Education website](#), for the complete standards.

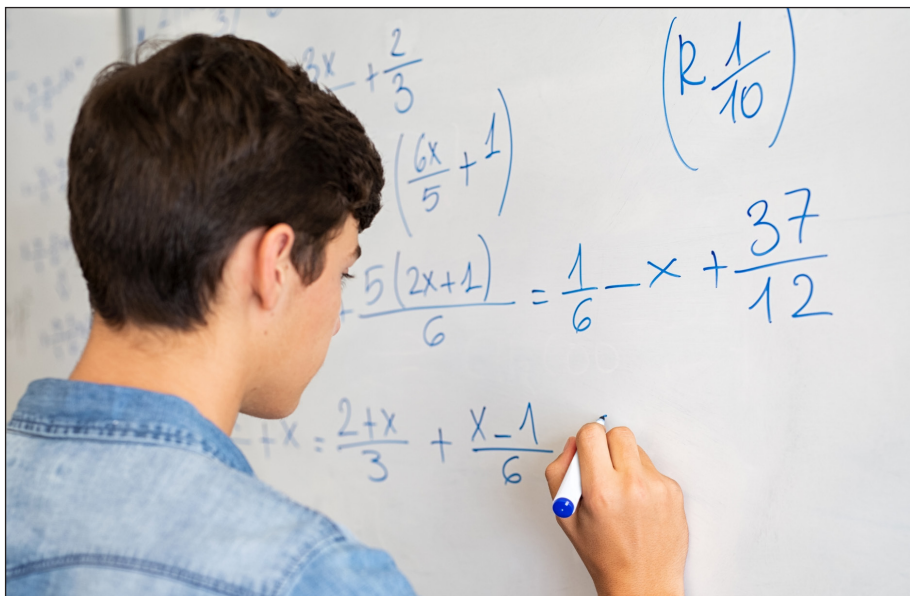
Steps to Success

This document is designed to

- Provide examples of the standards, skills, and knowledge your child will learn in mathematics.

The South Carolina College-and Career-Ready Standards for Mathematics:

- Outline the knowledge and skills students must master so that, as high-school graduates, they have the expertise needed to be successful in college or careers.
- Provide a set of grade-level standards, “stair steps,” based on the previous grade’s standards which serve as the foundation for the next grade.
- Ensure that no matter where a student lives in South Carolina, the expectations for learning are the same.



Human knowledge now doubles about every three years. Therefore, revision of South Carolina’s standards occurs periodically to respond to this growth of knowledge and increase of needed skills so our students will be ready for college or jobs. The College-and Career-Ready Standards prepare students for dealing with the growing mass of information by not only emphasizing content knowledge but by also stressing the skills of reasoning, analyzing data, and applying information to examine and solve situations.

South Carolinians developed these academic standards for South Carolina’s children. The Mathematics standards are aligned with the Profile of the South Carolina Graduate, which summarizes the knowledge, skills, and habits employers expect. Developed by business leaders, the Profile is approved by the South Carolina Chamber of Commerce and endorsed by the Superintendents’ Roundtable as well as South Carolina’s colleges and universities. The Profile demands world-class knowledge and skills, and emphasizes critical thinking and problem solving, communication, and interpersonal skills.

DATA, PROBABILITY, AND STATISTICAL REASONING

Algebra 1 students will continue working with categorical and quantitative variables. They will use statistical reasoning to summarize, represent, interpret and model data.

- Summarize and use categorical data in two-way frequency tables to make inferences and interpret the data in terms of real-world or mathematical situations.
- Find the linear functions for scatter plots with or without technology.
- Determine the correlation coefficient and the line of best fit to evaluate the linear association to determine if it is positive, negative, weak or strong.
- Interpret the slope and intercept of a linear model in the context of the data and use that model to predict values inside and outside of the data set

MEASUREMENT, GEOMETRY, AND SPATIAL REASONING

Algebra 1 students will extend their learning of measurements to solve problems in a real-world context.

- Producing graphs in the context of situations to determine if the scale of the graph makes sense.
- Recognize when to round up or round down when a fractional quantity does not make sense in the context of the situation.

NUMERICAL REASONING

Algebra 1 students will represent rational and irrational numbers on a number line and represent or simplify exponents and radical expressions in multiple ways.

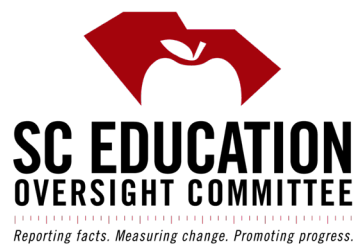
- Rewrite numerical and algebraic expressions using rational exponents and radical expressions.
- Translate between rational exponents and radical expressions.

PATTERNS, ALGEBRA, AND FUNCTIONAL REASONING

Algebra 1 students will create, solve, and transform expressions, equations and inequalities in the real-world and represent the relationships on a graph. Students will interpret solutions to determine if they are reasonable. Students will represent and interpret functions symbolically and graphically.

- Solve and transform equations and formulas in different forms to solve real-world situations.
- Add, subtract and multiply polynomials.
- Solve and graph equations including linear, exponential and quadratic in a real-world context.
- Write and translate arithmetic and geometric sequences.
- Recognize and interpret key features of a function to analyze solutions when graphed.
- Interpret transformations of functions on a graph and write the equation of the transformed function.

1205 Pendleton Street
Room 502 Brown Building
Columbia, SC 29201
www.eoc.sc.gov



The South Carolina Education Oversight Committee (EOC) is an independent, nonpartisan group of 18 educators, business people, and elected officials appointed by the legislature and governor. The EOC enacts the South Carolina Education Accountability Act of 1998, which sets standards for improving the state's K-12 educational system. The EOC reviews the state's education improvement process, assesses how schools are doing, and evaluates the standards schools must meet to build the education system needed to compete in this century.