MASTERY VIEW
Predictive Assessments

South Carolina
Algebra I (Traditional)
2025-2026 Pacing Guide

Note: The South Carolina College- and Career-Ready (SCCCR) Mathematical Process Standards describe the varieties of expertise that mathematics educators should seek to develop in their students. While they are not specifically stated in this pacing guide, students should be developing these skills throughout the school year.

Unit	Standards	Major Topics/Concepts
Exponents, Radicals, and Polynomials	A1.NR.1.1 A1.NR.2.1 A1.PARF.1.4	Rewrite numerical and algebraic expressions of irrational and rational numbers involving radicals, including addition, subtraction, multiplication, and division. Limit to square and cube roots. Use the definition of the meaning of rational exponents to translate between rational exponent and radical forms. Translate between rational exponents and radical expressions of irrational and rational numbers. Use properties of addition, subtraction, multiplication, and division to simplify radical and rational expressions. Limit to square and cube roots. Add, subtract, and multiply polynomials with initial terms up to a degree of 2.
Quantities	A1.MGSR.1.1	Identify any limitations specific to a real-world situation.
Expressions and Equations	A1.PAFR.1.1 A1.PAFR.1.2 A1.PAFR.1.3	Transform an equation in one variable to create new equations that have the same solution as the original and justify the steps taken. Solve literal equations and formulas for a specified variable including equations and formulas that arise in a variety of disciplines. Solve mathematical and real-world situations using linear, quadratic, exponential (same bases), and linear absolute value equations in one variable.
Multi-Variable Equations	A1.PAFR.2.3 A1.PAFR.2.6 A1.PAFR.3.1	Solve and graph linear, quadratic, exponential, and linear absolute value equations given in tabular, symbolic, and/or verbal forms using intercepts, domain and range, intervals of increasing and decreasing, vertex (maximum and minimum), end-behavior, and symmetry, and interpret these in terms of mathematical and real-world situations. Create symbolic representations of linear and exponential functions, including arithmetic and geometric sequences, given graphs, verbal descriptions, and tables. Recognize that $f(x)$ denotes the output of function f that corresponds to the input x, and this corresponds to the set of all the ordered pairs (x, y) that satisfy the equation $y = f(x)$ both tabularly and graphically.
1st Cumulative Assessment (covering all content to this point)		
Systems of Equations	A1.PAFR.1.3 A1.PAFR.2.4 A1.PAFR.2.7 A1.PAFR.2.8	Solve mathematical and real-world situations using linear, quadratic, exponential (same bases), and linear absolute value equations in one variable.

Unit	Standards	Major Topics/Concepts
	A1.PAFR.2.9	Create, solve, and graph linear inequalities in two variables. Use graphs to obtain exact and/or approximate solutions of equations, inequalities, and systems of linear equations in two variables (given or obtained by using technology). Solve an equation of the form $f(x) = g(x)$ graphically by identifying the x-coordinate(s) of the point(s) of intersection of the graphs of $y = f(x)$ and $y = g(x)$. Solve systems of linear equations algebraically and graphically.
Linear Functions	A1.PAFR.2.1 A1.PAFR.2.3 A1.PAFR.2.5 A1.PAFR.2.6 A1.PAFR.3.1 A1.PAFR.3.2 A1.PAFR.3.3 A1.PAFR.4.3	Transform linear, quadratic, exponential, and linear absolute value functions to equivalent forms to identify slope and y-intercept for linear, vertex, and roots (if any) for quadratic and linear absolute value, and y-intercept for exponential. Solve and graph linear, quadratic, exponential, and linear absolute value equations given in tabular, symbolic, and/or verbal forms using intercepts, domain and range, intervals of increasing and decreasing, vertex (maximum and minimum), end-behavior, and symmetry, and interpret these in terms of mathematical and real-world situations. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. Create symbolic representations of linear and exponential functions, including arithmetic and geometric sequences, given graphs, verbal descriptions, and tables. Recognize that $f(x)$ denotes the output of function f that corresponds to the input x, and this corresponds to the set of all the ordered pairs (x, y) that satisfy the equation $y = f(x)$ both tabularly and graphically. Use the definition of a function to analyze the domain and range of a function in relation to its graph, mapping, table, verbal, and/or symbolic description and, where applicable, using interval and set notation. Translate among graphical, tabular, verbal, and symbolic representations in function notation, to identify intercepts, intervals where the function is increasing, decreasing, constant, maximums and minimums, and symmetries and explain their meanings in real-world and mathematical situations. Given different representations of two different functions, compare key features including intercepts, domain and range, intervals of increasing and decreasing, constant, average rate of change, and maximum and minimum values.
Quadratic Expressions	A1.PAFR.1.1 A1.PAFR.1.2 A1.PAFR.1.3	Transform an equation in one variable to create new equations that have the same solution as the original and justify the steps taken.

Unit	Standards	Major Topics/Concepts
and Equations	A1.PAFR.2.1 A1.PAFR.2.3	Solve literal equations and formulas for a specified variable including equations and formulas that arise in a variety of disciplines. Solve mathematical and real-world situations using linear, quadratic, exponential (same bases), and linear absolute value equations in one variable. Transform linear, quadratic, exponential, and linear absolute value functions to equivalent forms to identify slope and y-intercept for linear, vertex, and roots (if any) for quadratic and linear absolute value, and y-intercept for exponential. Solve and graph linear, quadratic, exponential, and linear absolute value equations given in tabular, symbolic, and/or verbal forms using intercepts, domain and range, intervals of increasing and decreasing, vertex (maximum and minimum), end-behavior, and symmetry, and interpret these in terms of mathematical and real-world situations.
2nd Cumulative Assessment (covering all content to this point)		
Quadratic Functions	A1.PAFR.2.2 A1.PAFR.3.1 A1.PAFR.3.2 A1.PAFR.3.3 A1.PAFR.3.4 A1.PAFR.4.1 A1.PAFR.4.3	Solve quadratic equations by completing the square, factoring, and the quadratic formula, explaining the connection between the zeros of the function derived from the equation, its linear factors (if it factors), the x-intercepts of its graph (if they exist), and the solutions (if any) to the corresponding quadratic equation. Recognize that $f(x)$ denotes the output of function f that corresponds to the input x, and this corresponds to the set of all the ordered pairs (x, y) that satisfy the equation $y = f(x)$ both tabularly and graphically. Use the definition of a function to analyze the domain and range of a function in relation to its graph, mapping, table, verbal, and/or symbolic description and, where applicable, using interval and set notation. Translate among graphical, tabular, verbal, and symbolic representations in function notation, to identify intercepts, intervals where the function is increasing, decreasing, constant, maximums and minimums, and symmetries and explain their meanings in real-world and mathematical situations. Interpret how lead coefficients impact the shape of a function's graph. Describe the effect of the transformations $kf(x)$, $f(x) + k$, $f(x + k)$, $f(x) - k$, $f(x - k)$, and combinations of such transformations on the graph of parent function $y = f(x)$ for any real number k; find the value of k given the graphs; and write the equation of a transformed parent function given its graph. Given different representations of two different functions, compare key features including intercepts, domain and range, intervals of increasing and decreasing, constant, average rate of change, and maximum and minimum values.

Unit	Standards	Major Topics/Concepts
Exponential Functions	A1.PAFR.1.3 A1.PAFR.2.1 A1.PAFR.2.3 A1.PAFR.2.5 A1.PAFR.2.6 A1.PAFR.2.10 A1.PAFR.3.1 A1.PAFR.3.2 A1.PAFR.3.4 A1.PAFR.4.1 A1.PAFR.4.3	Solve mathematical and real-world situations using linear, quadratic, exponential (same bases), and linear absolute value equations in one variable. Transform linear, quadratic, exponential, and linear absolute value functions to equivalent forms to identify slope and y-intercept for linear, vertex, and roots (if any) for quadratic and linear absolute value, and y-intercept for exponential. Solve and graph linear, quadratic, exponential, and linear absolute value equations given in tabular, symbolic, and/or verbal forms using intercepts, domain and range, intervals of increasing and decreasing, vertex (maximum and minimum), end-behavior, and symmetry, and interpret these in terms of mathematical and real-world situations. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. Create symbolic representations of linear and exponential functions, including arithmetic and geometric sequences, given graphs, verbal descriptions, and tables. Analyze the growth/decay rate between linear and exponential functions specifically between consecutive integers. Recognize that $f(x)$ denotes the output of function f that corresponds to the input x, and this corresponds to the set of all the ordered pairs (x, y) that satisfy the equation $y = f(x)$ both tabularly and graphically. Use the definition of a function to analyze the domain and range of a function in relation to its graph, mapping, table, verbal, and/or symbolic description and, where applicable, using interval and set notation. Interpret how lead coefficients impact the shape of a function's graph. Describe the effect of the transformations $kf(x)$, $f(x) + k$, $f(x + k)$, $f(x) - k$, $f(x - k)$, and combinations of such transformations on the graph of parent function $y = f(x)$ for any real number k; find the value of k given the graphs; and write the equation of a transformed parent function given its graph. Given different representations of two different functions, compare key features including intercepts, domain and range, intervals of increasing and decreasing, constant, average rate of change, and maximum and minimum values.
Comparing Functions	A1.PAFR.2.5 A1.PAFR.2.6 A1.PAFR.2.10 A1.PAFR.3.1 A1.PAFR.3.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.

Unit	Standards	Major Topics/Concepts
	A1.PAFR.3.3 A1.PAFR.3.4 A1.PAFR.4.1 A1.PAFR.4.2 A1.PAFR.4.3 A1.MGSR.1.1	Create symbolic representations of linear and exponential functions, including arithmetic and geometric sequences, given graphs, verbal descriptions, and tables. Analyze the growth/decay rate between linear and exponential functions specifically between consecutive integers. Recognize that $f(x)$ denotes the output of function f that corresponds to the input x, and this corresponds to the set of all the ordered pairs (x, y) that satisfy the equation $y = f(x)$ both tabularly and graphically. Use the definition of a function to analyze the domain and range of a function in relation to its graph, mapping, table, verbal, and/or symbolic description and, where applicable, using interval and set notation. Translate among graphical, tabular, verbal, and symbolic representations in function notation, to identify intercepts, intervals where the function is increasing, decreasing, constant, maximums and minimums, and symmetries and explain their meanings in real-world and mathematical situations. Interpret how lead coefficients impact the shape of a function's graph. Describe the effect of the transformations $kf(x)$, $f(x) + k$, $f(x + k)$, $f(x) - k$, $f(x - k)$, and combinations of such transformations on the graph of parent function $y = f(x)$ for any real number k; find the value of k given the graphs; and write the equation of a transformed parent function given its graph. Given a real-world or mathematical situation, determine the parent graph that best models the situation. Given different representations of two different functions, compare key features including intercepts, domain and range, intervals of increasing and decreasing, constant, average rate of change, and maximum and minimum values. Identify any limitations specific to a real-world situation.
Data and Statistics	A1.DPSR.1.1 A1.DPSR.1.2 A1.DPSR.1.3 A1.DPSR.1.4 A1.DPSR.2.1 A1.DPSR.2.2 A1.DPSR.2.3	Summarize categorical data in two-way frequency tables, interpret relative frequencies in real-world situations, and informally determine possible associations and trends in the data. Summarize quantitative data in a table and on a scatter plot and describe how the variables are associated. Limit to linear data. Find a linear function for a scatter plot that suggests a linear association. For linear associations, use technology to determine the correlation coefficient, evaluate the strength of the association, and find the line of best fit.

Unit	Standards	Major Topics/Concepts
		Use two-way frequency tables to make inferences and interpret the data in terms of real-world or mathematical situations. Interpret the slope and the intercept of a linear model in the context of the data. Use a linear model to interpolate and extrapolate unknown values close to the data set.
Final Comprehensive Assessment (covering all content)		