Algebra 2 AAC Scope and Sequence 2025-2026

TEKS Distribution among units

Process Standards

	2A.1A	2A.1B	2A.1C	2A.1D	2A.1E	2A.1F	2A.1G
Unit 1	X	X	X	X	X	X	X
Unit 2	X	X	X	X	X	X	X
Unit 3	X	X	X	X	X	X	X
Unit 4	X	X	X	X	X	X	X
Unit 5	X	X	X	X	X	X	X
Unit 6	X	X	X	X	X	X	X
Unit 7	X	X	X	X	X	X	X
Unit 8	X	X	X	X	X	X	X
Unit 9	X	X	X	X	X	X	X

Content Standards

	2A.2A	2A.2B	2A.2C	2A.2D	2A.3A	2A.3B	2A.3C	2A.3D	2A.3E	2A.3F	2A.3G	2A.4A	2A.4B	2A.4C	2A.4D	2A.4E	2A.4F	2A.4G	2A.4H	2A.5A	2A.5B	2A.5C	2A.5D	2A.5E	2A.6A	2A.6B	2A.6C	2A.6D	2A.6E	2A.6F	2A.6G	2A.6H	2A.6I	2A.6J	2A.6K	2A.6L	2A.7A	2A.7B	2A.7C	2A.7D	2A.7E	2A.7F	2A.7G	2A.7H	2A.7I	2A.8A	2A.8B	2A.8C
Unit 1	X																										X	X	X	X															X			
Unit 2			X	X				X	X	X																																						
Unit 3					X		X	X				X	X		X	X	X		X																					X					X			
Unit 4	X	X	X	X										X		X	X	X																												X	X	
Unit 5	X	X	X	X																					X	X																				X	X	X
Unit 6																																						X	X	X	X	X			X			
Unit 7	X																														X	X	X	X	X	X												
Unit 8	X	X	X	X																X	X	X	X	X																					X			
Unit 9																																														X	X	X

The standards below are color coded to the MAP categories listed below.

Function Attributes, Inverses, and Data

Number and Algebraic Methods

Other Functions, Equations, Inequalities, and Systems

Quadratic, Square Root, Exponential, and Logarithmic Functions, Equations, and Inequalities

Algebra 2 AAC Scope and Sequence 2025-2026
Mathematical Process Standards: The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: 2A.1A Apply mathematics to problems arising in everyday life, society, and the workplace 2A.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution 2A.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems 2A.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate 2A.1E Create and use representations to organize, record, and communicate mathematical ideas 2A.1F Analyze mathematical relationships to connect and communicate mathematical ideas 2A.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1
Unit 1: Absolute Value Functions Estimated Date Range: Aug. 12 – Sept. 5 (18 total school days) Instructional & Re-engagement Days in Unit: 18 days
Assessments

STATE/NATIONAL ASSESSMENTS N/A	DISTRICT ASSESSMENTS N/A	COMMON FORMATIVE ASSESSMENTS (CFAs) N/A

Concepts within the Unit	TEKS
Establishing a Positive Mathematics Community Suggested Days: 3	Process Standards: 2A.1A Apply mathematics to problems arising in everyday life, society, and the workplace 2A.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution 2A.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems 2A.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate 2A.1E Create and use representations to organize, record, and communicate mathematical ideas 2A.1F Analyze mathematical relationships to connect and communicate mathematical ideas 2A.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication
Concept #1: Formulating and Solving Absolute Value Equations and Inequalities Suggested Days: 6	**Priority Standards** **2A.6E solve absolute value linear equations.** Important Standards 2A.6D formulate absolute value linear equations 2A.6F solve absolute value linear inequalities; 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.
Concept #2: Graphing, Writing, and Analyzing Absolute Value Functions Suggested Days: 6	**Priority Standards** **2A.2A** graph the functions $f(x)=\sqrt{x}, f(x)=1/x, f(x)=x^3, f(x)=\sqrt[3]{x}, f(x)=b^x, f(x)=|x|,$ ~~and $f(x)=log_b(x)$ where b is 2,10, and e~~, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, ~~asymptotic behavior~~, and maximum and minimum given an interval Important Standards

| | 2A.6E solve absolute value linear equations.
2A.6C analyze the effect on the graphs of *f(x)* = |*x*| when *f(x)* is replaced by *af(x), f(bx), f(x-c),* and *f(x)+d* for specific positive and negative real values of *a, b, c,* and *d*;
2A.6D formulate absolute value linear equations
2A.7I write the domain and range of a function in interval notation, inequalities, and set notation. |
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Unit 2: Systems of Equations and Inequalities
Estimated Date Range: Sept. 8 – Oct. 10 (23 total school days)
Instructional & Re-engagement Days in Unit: 20 days

Assessments

| STATE/NATIONAL ASSESSMENTS
N/A | DISTRICT ASSESSMENTS
NWEA BOY MAP (3 days)
Testing Window Sept. 9 – Sept. 11 | COMMON FORMATIVE ASSESSMENTS (CFAs)
N/A |
|---|---|---|

Concepts within the Unit	TEKS
Concept #1: Write and Solve Systems of Inequalities
Suggested Days: 7	Important Standards
2A.3E formulate systems of at least two linear inequalities in two variables
2A.3F solve systems of two or more linear inequalities in two variables; and
2A.3G determine possible solutions in the solution set of systems of two or more linear inequalities in two variables
Concept #2: Write and Solve Systems of Equations in Three Variables
Suggested Days: 10 | **Priority Standards**
2A.3B solve systems of three linear equations in three variables by using Gaussian elimination, technology with matrices, and substitution;

Important Standards
2A.3A formulate systems of equations, including systems consisting of three linear equations in three variables ~~and systems consisting of two equations, the first linear and the second quadratic;~~ |

Grading Period 2
Unit 3: Quadratic Relations and Functions
Estimated Date Range: Oct. 21 – Nov. 14 (19 total school days)
Instructional & Re-engagement Days in Unit: 18 days

Assessments

| STATE/NATIONAL ASSESSMENTS
PSAT (1 day)
Testing Window Oct. 2 | DISTRICT ASSESSMENTS
N/A | COMMON FORMATIVE ASSESSMENTS (CFAs)
N/A |
|---|---|---|

Concepts within the Unit	TEKS

Concept #1: Complex Numbers Suggested Days: 3	Important Standards 2A.4F solve quadratic ~~and square root~~ equations 2A.7A add, subtract, and multiply complex numbers
Concept #2: Writing Quadratic Equations Suggested Days: 5	Important Standards 2A.4A write the quadratic function given three specified points in the plane; 2A.4B write the equation of a parabola using given attributes, including vertex, focus, directrix, axis of symmetry, and direction of opening; 2A.4D transform a quadratic function $f(x) = ax^2 + bx + c$ to the form $f(x) = a(x - h)^2 + k$ to identify the different attributes of $f(x)$. 2A.4E formulate quadratic ~~and square root~~ equations using technology given a table of data; 2A.7I write the domain and range of a function in interval notation,
Concept #3: Solve Quadratic Equations and Inequalities Suggested Days: 6	**Priority Standards** **2A.4F solve quadratic ~~and square root~~ equations** Important Standards 2A.4A write the quadratic function given three specified points in the plane; 2A.4D transform a quadratic function $f(x) = ax^2 + bx + c$ to the form $f(x) = a(x - h)^2 + k$ to identify the different attributes of $f(x)$. 2A.4E formulate quadratic ~~and square root~~ equations using technology given a table of data; 2A.4H solve quadratic inequalities
Concept #4: Solving Linear-Quadratic Systems Suggested Days: 2	**Priority Standards** **2A.3C solve, algebraically, systems of two equations in two variables consisting of a linear equation and a quadratic equation** Important Standards 2A.3A formulate systems of equations, ~~including systems consisting of three linear equations in three variables and~~ systems consisting of two equations, the first linear and the second quadratic; 2A.3D determine the reasonableness of solutions to systems of a linear equations and a quadratic equation in two variables 2A.4B write the equation of a parabola using given attributes, including vertex, focus, directrix, axis of symmetry, and direction of opening;

Unit 4: Quadratic and Square Root Functions			
Estimated Date Range: Nov. 17 – Dec. 19 (20 total school days)			
Instructional & Re-engagement Days in Unit: 16 days			
Assessments			
STATE/NATIONAL ASSESSMENTS N/A	**DISTRICT ASSESSMENTS** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A	**Semester Exams** (4 days) Testing Window Dec. 16 – Dec. 19
Concepts within the Unit	**TEKS**		
Concept #1: Inverses of Quadratic and Square Root Functions Suggested Days: 5	**Priority Standards** **2A.2C describe and analyze the relationship between a function and its inverse (quadratic and square root, ~~logarithmic and exponential~~), including the restriction(s) on domain, which will restrict its range;** Important Standards 2A.2B graph and write the inverse of a function using notation such as $f^{-1}(x)$ 2A.2D use the composition of two functions, including the necessary restrictions on the domain, to determine if the functions are inverses of each other 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.		
Concept #2: Solving Square Root Equations Suggested Days: 5	**Priority Standards** **2A.4F solve ~~quadratic and~~ square root equations** Important Standards 2A.4G identify extraneous solutions of square root equations 2A.7H solve equations involving rational exponents		
Concept #3: Writing and Graphing Square Root Functions Suggested Days: 5	**Priority Standards** **2A.2A** graph the functions $f(x)=\sqrt{x}$, ~~$f(x)=1/x$, $f(x)=x^3$~~, $f(x)=\sqrt[3]{x}$, ~~$f(x)=b^x$~~, $f(x)=|x|$, and ~~$f(x)=log_b(x)$ where b is 2,10, and e~~, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, ~~asymptotic behavior~~, and maximum and minimum given an interval Important Standards 2A.4F solve quadratic and square root equations 2A.4C determine the effect on the graph of $f(x) = \sqrt{x}$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(bx)$, and $f(x - c)$ for specific positive and negative values of $a, b, c,$ and d 2A.4E formulate ~~quadratic and~~ square root equations using technology given a table of data; 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.		

Grading Period 3
Unit 5: Cubic/Cube Root Functions Estimated Date Range: Jan. 8 – Feb. 3 (18 total school days) Instructional & Re-engagement Days in Unit: 15 days

Assessments		
STATE/NATIONAL ASSESSMENTS N/A	**DISTRICT ASSESSMENTS** NWEA MOY MAP (3 days) Testing Window Jan. 27 – Jan. 29	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A

Concepts within the Unit	TEKS
Concept #1: Radical Expressions and Equations with Rational Exponents Suggested Days: 3	<u>Important Standards</u> 2A.7G rewrite radical expressions that contain variables to equivalent forms; 2A.7H solve equations involving rational exponents
Concept #2: Solving Cubic and Cube Root Equations Suggested Days: 3	<u>Important Standards</u> 2A.6B solve cube root equations that have real roots 2A.7H solve equations involving rational exponents
Concept #3: Graphing Cubic Functions Suggested Days: 7	**<u>Priority Standards</u>** **2A.2A** graph the functions $f(x)=\sqrt{x}, f(x)=1/x, f(x)=x^3, f(x)=\sqrt[3]{x}, f(x)=b^x, f(x)=|x|,$ and $f(x)=\log_b(x)$ where b is 2,10, and e, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, and maximum and minimum given an interval **2A.2C describe and analyze the relationship between a function and its inverse (quadratic and square root, logarithmic and exponential), including the restriction(s) on domain, which will restrict its range;** <u>Important Standards</u> 2A.6A analyze the effect on the graphs of $f(x) = x^3$ and $f(x) = \sqrt[3]{x}$ when $f(x)$ is replaced by $af(x), f(bx), f(x - c),$ and $f(x) + d$ for specific positive and negative real values of $a, b, c,$ and d; 2A.2B graph and write the inverse of a function using notation such as $f^{-1}(x)$ 2A.2D use the composition of two functions, including the necessary restrictions on the domain, to determine if the functions are inverses of each other 2A.6B solve cube root equations that have real roots 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.

Unit 6: Operations of Polynomial and Rational Functions		
Estimated Date Range: Feb. 4 – Mar. 5 (19 total school days)		
Instructional & Re-engagement Days: 18 days		
Assessments		
STATE/NATIONAL ASSESSMENTS TELPAS (1 day) Testing Window Feb. 16 – Mar. 27	**DISTRICT ASSESSMENTS** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A
Concepts within the Unit	**TEKS**	

Concepts within the Unit	TEKS
Concept #1: Add, Subtract, and Multiply Polynomials Suggested Days: 3	Important Standards 2A.7B add, subtract and multiply polynomials
Concept #2: Divide and Factor Polynomials Suggested Days: 6	Important Standards 2A.7C determine the quotient of a polynomial of degree three and of degree four when divided by a polynomial of degree one and of degree two 2A.7D determine the linear factors of a polynomial function of degree three and of degree four using algebraic methods 2A.7E determine linear and quadratic factors of a polynomial expression of degree three and of degree four, including factoring the sum and difference of two cubes and factoring by grouping
Concept #3: Multiply and Divide Rational Expressions Suggested Days: 3	**Priority Standards** **2A.7F determine the ~~sum, difference,~~ product, and quotient of rational expressions with integral exponents of degree one and of degree two;** Important Standards 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation
Concept #4: Add and Subtract Rational Expressions Suggested Days: 5	**Priority Standards** **2A.7F determine the sum, difference, product, and quotient of rational expressions with integral exponents of degree one and of degree two;** Important Standards 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation

Unit 7: Rational Functions (Continues in Grading Period 4) Estimated Date Range: Mar. 9 – Apr. 7 (16 total school days) Instructional & Re-engagement Days: 16 days *See Grading Period 4 for Details*		

Grading Period 4

Unit 7: Rational Functions (Continued)   Estimated Date Range: Mar. 9 – Apr. 7 (16 total school days)   Instructional & Re-engagement Days: 16 days

Assessments		
STATE/NATIONAL ASSESSMENTS N/A	**DISTRICT ASSESSMENTS** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A

Concepts within the Unit	**TEKS**
Concept #1: Solve Rational Equations Suggested Days: 4	**Priority Standards** **2A.6I** **solve rational equations that have real solutions** Important Standards 2A.6J determine the reasonableness of a solution to a rational equation 2A.6K determine the asymptotic restrictions on the domain of a rational function and represent domain and range using interval notation, inequalities, and set notation
Concept #2: Graph and Transform Rational Functions Suggested Days: 4	**Priority Standards** **2A.2A** graph the functions $f(x)=\sqrt{x}$, $f(x)=1/x$, $f(x)=x^3$, $f(x)=\sqrt[3]{x}$, $f(x)=b^x$, $f(x)=|x|$, and $f(x)=\log_b(x)$ where b is 2,10, and e, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, and maximum and minimum given an interval Important Standards 2A.6G analyze the effect on the graphs of f(x) = 1/x when *f(x)* is replaced by *af(x), f(bx), f(x-c)*, and *f(x) + d* for specific positive and negative real values of *a, b, c,* and *d* 2A.6K determine the asymptotic restrictions on the domain of a rational function and represent domain and range using interval notation, inequalities, and set notation
Concept #3: Writing and Solving Rational Equations Suggested Days: 5	**Priority Standards** **2A.6I** solve rational equations that have real solutions Important Standards 2A.6H formulate rational equations that model real-world situations 2A.6J determine the reasonableness of a solution to a rational equation

	2A.6K determine the asymptotic restrictions on the domain of a rational function and represent domain and range using interval notation, inequalities, and set notation
	2A.6L formulate and solve equations involving inverse variation

Unit 8: Exponential and Logarithmic Functions
Estimated Date Range: Apr. 8 – May 6 (21 total school days)
Instructional & Re-engagement Days in Unit: 21 days

Assessments		
STATE/NATIONAL ASSESSMENTS N/A	**DISTRICT ASSESSMENTS** N/A	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A

Concepts within the Unit	**TEKS**
Concept #1: Graph Exponential Functions Suggested Days: 4	**Priority Standards** **2A.2A** graph the functions $f(x)=\sqrt{x}, f(x)=1/x, f(x)=x^3, f(x)=\sqrt[3]{x}, f(x)=b^x, f(x)=\|x\|,$ and $f(x)=log_b(x)$ where b is 2,10, and e, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, and maximum and minimum given an interval Important Standards 2A.5A determine the effects on the key attributes on the graphs of $f(x) = b^x$ and $f(x) = log_b(x)$ where b is 2, 10, and e when $f(x)$ is replaced by $af(x), f(x) + d,$ and $f(x - c)$ for specific positive and negative real values of $a, c,$ and d 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.
Concept #2: Exponential and Logarithmic Functions as Inverses Suggested Days: 4	**Priority Standards** **2A.2C describe and analyze the relationship between a function and its inverse (quadratic and square root, logarithmic and exponential), including the restriction(s) on domain, which will restrict its range;** Important Standards 2A.2B graph and write the inverse of a function using notation such as $f^{-1}(x)$ 2A.2D use the composition of two functions, including the necessary restrictions on the domain, to determine if the functions are inverses of each other 2A.5C rewrite exponential equations as their corresponding logarithmic equations and logarithmic equations as their corresponding exponential equations 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.
Concept #3: Graph Logarithmic Functions Suggested Days: 4	**Priority Standards** **2A.2A** graph the functions $f(x)=\sqrt{x}, f(x)=1/x, f(x)=x^3, f(x)=\sqrt[3]{x}, f(x)=b^x, f(x)=\|x\|,$ and $f(x)=log_b(x)$ where b is 2,10, and e, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, and maximum and minimum given an interval

	Important Standards 2A.5A determine the effects on the key attributes on the graphs of $f(x) = b^x$ and $f(x) = log_b (x)$ where b is 2, 10, and e when $f(x)$ is replaced by $af(x)$, $f(x) + d$, and $f(x - c)$ for specific positive and negative real values of a, c, and d 2A.7I write the domain and range of a function in interval notation, inequalities, and set notation.
Concept #4: Write and Solve Exponential and Logarithmic Equations Suggested Days: 5	**Priority Standards** **2A.5D solve exponential equations of the form $y = ab^x$ where a is a nonzero real number and b is greater than zero and not equal to one and single logarithmic equations having real solutions** Important Standards 2A.5B formulate exponential and logarithmic equations that model real-world situations, including exponential relationships written in recursive notation 2A.5C rewrite exponential equations as their corresponding logarithmic equations and logarithmic equations as their corresponding exponential equations 2A.5E determine the reasonableness of a solution to a logarithmic equation

Unit 9: Data Analysis Estimated Date Range: May 7 – May 28 (15 total school days) Instructional & Re-engagement Days in Unit: 8 days

Assessments			
STATE/NATIONAL ASSESSMENTS N/A	**DISTRICT ASSESSMENTS** NWEA EOY MAP (3 days) Testing Window May 12 – May 14	**COMMON FORMATIVE ASSESSMENTS (CFAs)** N/A	**Semester Exams** (4 days) Testing Window May 22 – May 28

Concepts within the Unit	**TEKS**
Concept #1: Analyze Data Suggested Days: 3	Important Standards 2A.8A analyze data to select the appropriate model from among linear, quadratic, and exponential models
Concept #2: Regression Models Suggested Days: 4	**Priority Standards** **2A.8C predict and make decisions and critical judgments from a given set of data using linear, quadratic, and exponential models.** Important Standards 2A.8A analyze data to select the appropriate model from among linear, quadratic, and exponential models 2A.8B use regression methods available through technology to write a linear function, a quadratic function, and an exponential function from a given set of data