

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients. Link to Syllabus
	Unit Zero: Foundational Algebra Skills (to be phased out)
Essential Questions	How do we communicate using the language of mathematics? When problem solving, how do you know when to select the appropriate operation? How can expressions be written to indicate an order for operations? How does changing the order of operations affect the outcome when simplifying an expression?
Standards	AI.A-SSE.A.1 Interpret expressions that represent a quantity in terms of its context.* AI.A-SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients. N-RN-1: Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. N-RN-2: Rewrite expressions involving radicals and rational exponents using the properties of exponents.

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients. Link to Syllabus	
	N-RN-3: Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational. N-Q-1: Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. ^{1★} N-Q-2: Define appropriate quantities for the purpose of descriptive modeling.	
Concepts and skills	<i>Students will understand that...</i> Numbers and expressions can be represented in many different ways that have the same value. Numeric and algebraic expressions can be manipulated to make problems easier to solve.	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision.

^{1★} indicates Modeling standard.

(+) indicates standard beyond College and Career Ready.

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	Units provide meaning and context to quantities. The best solution to a problem may be an estimate, exact answer, or approximate answer, depending on the situation and degree of precision required. Mental computations are the basis for making reasonable estimates and sensible predictions The order of operations used to simplify expressions. How to identify and manipulate expressions that have like terms (including variable like terms and like radicals). Multiplication is a representation of repeated addition. Division by a rational number is equivalent to multiplying by its reciprocal. Positive exponents mean repeated multiplication and negative exponents mean repeated division.	7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients. Link to Syllabus	
	The inverse relationship between squaring a number and finding the square root and cubing a number and finding the cube root. Relevant vocabulary, including: • associative, commutative, and distributive properties • rational, real, and irrational numbers • terms, factors, and coefficients • exponent, base, power, square, cube, square root, cube root, radical • reciprocal, opposite, absolute value	
Content Objectives "I can Statements"	I can simplify and evaluate algebraic expressions using the order of operations and grouping symbols. I can communicate using the language of mathematics. I can substitute numbers for variables in algebraic expressions and simplify/evaluate. I can translate words into numeric and variable expressions. I can classify numbers by type of number. I can use the number line to graph and compare real numbers, including absolute value and opposites. I can add, subtract, multiply, and divide rational numbers, including signed numbers, fractions, decimals, and percents. I can estimate to check to see if answers are reasonable. I can round a number to the appropriate place value. I can interpret units in the context of the problem.	

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients. Link to Syllabus
	I can select the appropriate operation to model a real life situation. I can use notation to indicate order of operations in written expressions. I can use notation to change the order of operations in order to get a different solution.
Assessments, products, vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Pre- Algebra , Kuta Software Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems(Include equations arising from linear, quadratic, and exponential functions with integer exponents) Link to Syllabus
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	Unit ONE: Equations and Inequalities (in one variable)	
Essential Questions	How can we manipulate an equation to solve for an unknown quantity or value? How can I represent the solution of an inequality with one variable or two variables? What are the similarities and differences between solving inequalities and solving equations? How do I determine if an absolute value of an inequality should be written as an intersection or a union? How can I use equations and inequalities to model real life?	
Standards	A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems (Include equations arising from linear, quadratic, and exponential functions with integer exponents) A-CED.A.3 Represent constraints by linear equations or inequalities, and by systems of linear equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.* For example, represent inequalities describing nutritional and cost constraints on combinations of different foods. A-CED.A.4 Rearrange formulas to highlight a quantity of interest using the same reasoning as in solving equations (Properties of equality).* For example, rearrange Ohm's law $R=V^2/P$ to solve for voltage, V. Manipulate variables in formulas used in financial contexts such as for simple interest, $I=Prt$. A-REI.A.1 Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify or refute a solution method. A-REI.B Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	
Concepts and skills	<i>Students will understand that...</i> Inverse operations can be used to solve for the unknowns in an equation or inequalities	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics.

	A solution to an equation is the value or set of values that can be substituted to make the equation true Equations with two or more variables can be manipulated to be written in terms of either (any) of the variables. Mathematical modeling involves creating algebraic representations of quantitative real-world situations.	5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can explain each step in solving a linear equations I can create and solve linear equations in one variable I can use the properties of equality to solve linear equations with a variable on both side I can identify whether linear equations have one solution, infinitely many solutions or no solution I can rearrange formulas to highlight a quantity of interest using the same reason as solving equations(Properties of equality) I can use formulas and equations to solve problems I can create and solve inequalities in one variable I can create and solve a system of inequalities I can solve compound inequalities	
Assessments, products, vocabulary, practice		
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Pre- Algebra , Kuta Software Infinite Algebra 1, Kuta Software	

	Name of Course: Algebra 1
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	Massachusetts and National Standards: AI.A.CED.A.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales Link to Syllabus
	Unit TWO: Linear Equations and Inequalities
Essential Questions	Why are graphs and linear equations important? Can linear functions be used to model real world situations? What do the common characteristics tell us about the function? Why can you relate arithmetic sequences to linear functions? In what ways can you describe common characteristics shown as tables, graphs, and equations? What is slope and why is it important? How can I determine the equation of a line?
Standards	AREI-10: Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). SID-7: Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. ★ FLE-5: Interpret the parameters in a linear or exponential² function in terms of a context. ★ STANDARDS FOR MATHEMATICAL PRACTICE 4. Model with mathematics.

	7. Look for and make use of structure.	
Concepts and skills	<i>Students will understand that...</i> real-world situations can be modeled using slope intercept form equations. equations in two variables can be manipulated into a slope intercept form equation to determine characteristics of a situation. There are multiple methods of representation: Graph, Chart, Equation. there is a formula to find the slope of a line given two points the relationship between parallel and perpendicular line equations. domain/range of real world linear equations. linear equations can be written given various combinations of information.	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can write linear equations in two variables using slope intercept form to represent the relationship between two quantities I can interpret the slope and the intercept of a linear model I can write and graph linear equations in point-slope form I can analyze different forms of a line to interpret the slope and y-intercept of a linear model I can write and graph equations in standard forms I can use linear equations in standard form to interpret the x- and y- intercepts I can write equations to represent lines that are parallel and perpendicular to a given line I can show an understanding of the relationship between the slopes of a parallel and perpendicular lines by graphing	

Assessments, products, vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.F-IF.A.1 Understand the concept of a function and use function notation. Link to Syllabus
	Unit Three: Functions
Essential Questions	What are the characteristics of families of functions? What kinds of situations can be modeled with the different families of functions? How are Domain and Range determined? How do you interpret and use function notation? How do transformations to a function relate to translations of its graph?
Standards	AI.F-IF.A.1 Understand the concept of a function and use function notation. AI.F-BF.B.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Include linear, quadratic, exponential, and absolute value functions. Utilize technology to experiment with cases and illustrate an explanation of the effects on the graph. AI.F-IF.B.4

	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior.* AI.F-IF.B.6 Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*	
Concepts and skills	<i>Students will understand that...</i> Recognize that if each element of the domain of a relations assigns exactly one element of the renege, then the relation is a function Understand a reasonable domain in real world Interpret trend lines within the context of real world situations Understand definition of piecewise functions	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can understand that a relationship is a function if each element of the domain is assigned to exactly one element in the range I can write and evaluate linear functions using function notation I can create a linear function and relate the domain of a function to a graph I can interpret functions represented by graphs, tables and function notation in terms of a context. I can graph transformations of linear functions by multiplying or adding specific values of k to the input or output I can write arithmetic and geometric sequences bothe recursively and with an explicit formula I can translate between explicit and recursive formula I can fit a linear function for a scatter plot that suggests a linear association. I can graph an Absolute Value function and identify the key features of the graph I can graph transformation of piecewise defined functions	
Assessments, products, vocabulary,		

practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Pre- Algebra , Kuta Software Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-REI.C.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. Link to Syllabus
	Unit FOUR: Systems of Equations and Inequalities
Essential Questions	How do I determine what strategy will work best in a given situation? How does the graph of a function relate to its algebraic equation? How can algebra skills be applied in solving real world problems?
Standards	ACED-2: Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. ACED-3: Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. AREI-5:

	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions. AREI-6: Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. AREI-7: Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. <i>For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.</i>	
Concepts and skills	<i>Students will know...</i> How to solve systems of equations using various methods to arrive at an appropriate solution(s). How to use estimation to judge the reasonableness of results of computations and of solutions to problems involving real numbers. The relationship between various representations of a line and how to demonstrate each.	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can graph systems of linear equations in two variables to find solution I can write a system of linear equations in two variables to represent real-world problems I can use the substitution method to solve systems of equations I can use the elimination method to solve systems of equations I can graph solutions to linear inequalities in two variables I can graph the solution set of a system of linear inequalities in two variables I can interpret solutions as viable or nonviable options	
Assessments, products,		

vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.F-LE.B.5 Interpret the parameters in a linear or exponential function (of the form $f(x) = bx + k$) in terms of a context.* Link to Syllabus
	Unit FIVE: Exponential Functions
Essential Questions	What are the characteristics of exponential functions? What kinds of situations can be modeled with exponential growth or exponential decay functions? How are arithmetic sequences related to linear functions? How are geometric sequences related to exponential functions? How do changes in an exponential function relate to translations of its graph?
Standards	AI.F-LE.B.5 Interpret the parameters in a linear or exponential function (of the form $f(x) = bx + k$) in terms of a context.* AI.F-BF.A.2 Write arithmetic and geometric sequences both recursively and with an explicit formula to model situations, and translate between the two forms.* AI.F-BF.B.3

	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Include linear, quadratic, exponential, and absolute value functions. Utilize technology to experiment with cases and illustrate an explanation of the effects on the graph.	
Concepts and skills	<i>Students will be able to...</i> Interpret key feature of the graph of exponential functions Compare linear and exponential functions Compare arithmetic and geometric sequences Identify and interpret the effect that changing h and k has on the graphs of linear and exponential functions	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can extend properties of integer exponents to rational exponents to rewrite radical expressions using rational exponents I can solve equations with rational exponents using properties of exponents I can sketch graphs showing key features of exponential functions I can write exponential functions using tables and graphs I can compare linear and exponential functions I can construct exponential growth and decay functions given a description of a relationship I can model real world situations to exponential functions(simple interest and compound interest) I can find explicit and recursive formulas for geometric sequences I can translate between recursive and explicit formula for geometric sequences I can translate the graph of an exponential function vertically and horizontally identify the effect of different values of h and k	
Assessments, products,		

vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.A-APR.A.1.a Perform operations on polynomial expressions (addition, subtraction, multiplication) and compare the system of polynomials to the system of integers when performing operations Link to Syllabus
	Unit SIX: Polynomials
Essential Questions	How does one reason logically with quadratic equations? Can one equation have more than one solution? What do quadratic equations model in the real world?
Standards	AI.A-APR.A.1.a Perform operations on polynomial expressions (addition, subtraction, multiplication) and compare the system of polynomials to the system of integers when performing operations AI.A-APR.A.1.b Factor and/or expand polynomial expression, identify and combine like terms and apply the Distributive Property AI.A-REI.B.4 Solve quadratic equations in one variable

	Standards for Mathematical Practice 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively. 4. Model with mathematics	
Concepts and skills	<i>Students will know...</i> factors of a quadratic equation describe and analyze nonlinear relationships. solving quadratic equations involves a process of creating simpler equivalent equations. there are multiple approaches to solving and factoring quadratic equations. equations that look different may be equivalent. nonlinear equations can be simplified into multiple linear expressions. Characteristics of quadratic equations describe the nature of the real world problem it models. Some solutions to quadratic equations are extraneous.	<i>Students will be skilled at (be able to)...</i> transform an expression from standard form to factored form. solve a quadratic equation to reveal the zeros of the function it defines. employ quadratic equations to reason and analyze real world models.
Content Objectives "I can Statements"	I can identify the parts of a polynomial expression. I can classify polynomials by the number of terms and degree I can write a polynomial in standard form. I can add and subtract two polynomials. I can use the Distributive Property with polynomials I can multiply polynomials using a table and an area model	

	I can determine the square of a binomial I can find the product of sum and difference of two squares I can solve real-world problems involving square of the binomial I can find the greatest common factor of the terms polynomial I can use the structure of a polynomial to rewrite it in factored form I can factor a trinomial in the form $a^2 + bx + c$ by find two binomial factors I can identify and use patterns in the signs of the coefficients of the terms of a trinomial I can identify and factor a trinomial that is a perfect square
Assessments, products, vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.F-IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior.* Link to Syllabus
	Unit Seven Quadratic Functions

Essential Questions	What is the connection between the graph of the function and the solutions to the quadratic equation? What evidence gives that the x-intercept is the solution of the quadratic equation? How is factoring used in solving quadratic equations? How does rewriting radicals in different forms help in communicating your answers? How are the characteristics of the different forms of the quadratic equations used to determine the best method of Solving? How do changes in a quadratic function relate to translations of its graph?	
Standards	AI.F-IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior.* AI.A-REI.B.4 Solve quadratic equations in one variable AI.A-SSE.B.3 Choose and produce an equivalent for of an expression to reveal and explain properties of the quantity represented by the expression AI.F-IF.C.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.	
Concepts and skills	<i>Students will understand that...</i> That the quadratic equations can be expressed in the general form of $ax^2 + bx + c = 0$ The x-intercepts of the graph of a quadratic equation represent the solution	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure.

	The key features of the various forms of the quadratic equation effect the graph of quadratic equation The different forms of the quadratic equation allow for multiple approaches to solving and factoring The zero product property is use to solve quadratic functions	8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can identify key features of the graph of a quadratic function using graph, tables and equations I can identify key features of the graph of quadratic functions written in vertex form I can graph functions in vertex form I can graph quadratic function in standard form and show the intercepts, maxima and minima I can determine how a, b, c affect the graph of $ax^2 + bx + c$ I can identify key features of parabolas I can use a graph to identify the x-intercepts as solutions of a quadratic equation I can use the Zero Product Property and factoring to find the solutions of a quadratic equation I can use zeros of a quadratic equation to sketch a graph I can write the factored form of a quadratic function from a graph	
Assessments, products, vocabulary, practice		
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software Delta Math	

	Name of Course: Algebra 1 Massachusetts and National Standards: AI.S-ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).* Link to Syllabus	
	Unit Eight: Statistics	
Essential Questions	How do you represent data visually? How can you interpret the data displayed in dot plots, box plots and histograms within the context it represents? How can you use measures of center to interpret and compare data sets displayed in dot plots, box plots, and histograms? How can you compare data sets?	
Standards	AI.S-ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).* AI.S-ID.A.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.*	
Concepts and skills	<i>Students will understand that...</i> Interpret and compare data sets displayed in dot plots, histograms, and box plots using measures of center and variability	<i>Students will be skilled at (be able to)...</i> Represent data using dot plots, box plots, box plots, and histograms and use them to interpret data displays within the given data's context
Content Objectives "I can Statements"	I can represent data using dot plots, box plots and histograms I can Interpret the data displayed in dot plots, box plots and histograms within the context it represents I can use measures of center to interpret and compare data sets displayed in dot plots, box plots, and histograms I can use measure of center to compare data sets	

Assessments, products, vocabulary, practice	
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software

	Name of Course: Algebra 1 Massachusetts and National Standards: AII.A-REI A. 1. Understand solving equations as a process of reasoning and explain the reasoning. 2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. Link to Syllabus
	Unit Nine Radical Functions
Essential Questions	Can you identify key features of the square root function? Can you identify key features of the cube root function? Can you identify common features of a function when given a graph or an equation? Are you able to graph and analyze transformations of functions?
Standards	AII.A-REI A. 3. Understand solving equations as a process of reasoning and explain the reasoning. 4. AII.F-IF B 5. Interpret functions that arise in applications in terms of the context

	All.F-IF B Interpret functions that arise in applications in terms of the context (polynomial, rational, square root and cube root, trigonometric, and logarithmic functions). 4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of Massachusetts Curriculum Framework for Mathematics 127 the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.	
Concepts and skills	<i>Students will understand that...</i> Describe key features of the square root function Identify key features of the cube root function Identify common features of a function when given an equation or a graph Analyze transformations of Function	<i>Mathematical Practices</i> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.
Content Objectives "I can Statements"	I can describe key features of the square root function I can Identify key features of the cube root function I can identify common features of a function when given a graph or an equations I can graph and analyze transformations of functions	
Assessments, products, vocabulary, practice		
Text, Materials, and Resources	enVision Algebra 1, Pearson, 2018 All Things Algebra, Gina Wilson, 2012-2018 Savas Learning Company online platform Infinite Algebra 1, Kuta Software	

