

SCCCR	Description	Textbook Module	Textbook Topic	Textbook Lesson Title	MATHia Module	MATHia Unit	MATHia Workspace
A1.AAPR.1	Add, subtract, and multiply polynomials and understand that polynomials are closed under these operations. (Limit to linear; quadratic.)	4: Maximizing and Minimizing	2: Solving Quadratic Equations	1: This Time, with Polynomials: Adding, Subtracting, and Multiplying Polynomials (M4-101 - M4-126)	4: Maximizing and Minimizing	4: Polynomial Operations	1: Introduction to Polynomial Arithmetic 2: Adding Polynomials 3: Subtracting Polynomials 4: Using a Factor Table to Multiply Polynomials 5: Multiplying Polynomials
						5: Quadratic Expression Factoring	1: Using a Factor Table to Multiply Binomials 2: Multiplying Binomials
A1.ACE.1	Create and solve equations and inequalities in one variable that model real-world problems involving linear, quadratic, simple rational, and exponential relationships. Interpret the solutions and determine whether they are reasonable. (Limit to linear; quadratic; exponential with integer exponents.)	2: Exploring Constant Change	1: Linear Functions	2: Fun With Functions, Linear Ones: Making Sense of Different Representations of Functions (M2-23-M2-40)			
			2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations (M2-79-M2-90) 3: Not All Statements are Equal: Modeling Linear Inequalities (M2-103-116) 4: Don't Confound Your Compounds: Solving and Graphing Compound Inequalities (M2-117 - M2-130)	2: Exploring Constant Change	2: Linear Equations	1: Modeling Rates of Change 2: Modeling Linear Equations Given Two Points 3: Modeling Linear Equations Given an Initial Point 4: Modeling Linear Functions Using Multiple Representations
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44)			
			2: Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92) 2: Powers and the Horizontal Line: Interpreting Parameters in Context (M3-93- M3-102)	4: Maximizing and Minimizing	1: Quadratic Models in Factored Form	1: Modeling Area as Product of Monomial and Binomial 2: Modeling Area as Product of Two Binomials 3: Interpreting Maximums of Quadratic Models
					3: Investigating Growth and Decay	5: Solving Exponential Equations	1: Solving Exponential Equations Using a Graph 2: Solving Contextual Exponential Relations Using Common Bases 3: Solving Complex Exponential Relations Using Common Bases

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A1.ACE.2	Create equations in two or more variables to represent relationships between quantities. Graph the equations on coordinate axes using appropriate labels, units, and scales. (Limit to linear; quadratic; exponential with integer exponents; direct and indirect variation.)		2: Sequences	3: Did You Mean Recursion? : Determining Recursive and Explicit Expressions from Contexts (M1-135 - M1-146) 4: 3 Pegs, N Discs: Modeling Using Sequences (M1-147 - M1-158)			
		2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations (M2-139-M2-154) 2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations (M2-155-M2-168) 3: Throwing Shade: Graphing Inequalities in Two Variables (M2-169-M2-184)			
			4: Functions Derived From Linear Relationships	2: Play Ball! : Absolute Value Equations and Inequalities (M2-237 - M2-250)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92) 2: Powers and the Horizontal Line: Interpreting Parameters in Context (M3-93-M3-102)			
A1.ACE.4	Solve literal equations and formulas for a specified variable including equations and formulas that arise in a variety of disciplines.	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	2: It's Literally About Literal Equations: Literal Equations (M2-91 - M2-102)	2: Exploring Constant Change	2: Linear Equations	5. Extending Equations to Literal Equations 6: Solving Literal Equations
A1.AREI.1	Understand and justify that the steps taken when solving simple equations in one variable create new equations that have the same solution as the original.	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations (M2-79 - M2-90)			

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A1.AREI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations (M2-79 - M2-90) 3: Not All Statements Are Made Equal: Modeling Linear Inequalities (M2-103-M2-116) 4: Don't Confound Your Compounds: Solving and Graphing Compound Inequalities (M2-117 - M2-130)	2: Exploring Constant Change	3: Linear Inequalities	1: Graphing Inequalities 2: Solving Two-Step Linear Inequalities 3: Representing Compound Inequalities
			4: Functions Derived from Linear Relationships	2: Play Ball! : Absolute Value Equations and Inequalities (M2-237 - M2-250)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44)			
A1.AREI.4	Solve mathematical and real-world problems involving quadratic equations in one variable.	4: Maximizing and Minimizing	2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140) 3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form: (M4-141-M4-152) 4: The Missing Link: Factoring and Completing the Square (M4-153-M4-174) 5: Ladies and Gentlemen, Please Welcome the Quadratic Formula: The Quadratic Formula (M4-175- M4-196)			

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A1.AREI.4.a	Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - h)^2 = k$ that has the same solutions. Derive the quadratic formula from this form.	4: Maximizing and Minimizing	2: Solving Quadratic Equations	4: The Missing Link: Factoring and Completing the Square (M4-153-M4-174) 5: Ladies and Gentlemen, Please Welcome the Quadratic Formula! : The Quadratic Formula (M4-175-M4-196)	4: Maximizing and Minimizing	5: Quadratic Expression Factoring	7: Completing the Square
A1.AREI.4.b	Solve quadratic equations by inspection, taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a + bi$ for real numbers a and b .	4: Maximizing and Minimizing	2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140) 3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form (M4-141-M4-152) 5: Ladies and Gentlemen, Please Welcome the Quadratic Formula! : The Quadratic Formula (M4-175-M4-196) 6: i Want to Believe: Imaginary and Complex Numbers (M4-197)	4: Maximizing and Minimizing	7: Quadratic Equation Solving	2: Solving Quadratic Equations by Factoring 3: Solving Quadratic Equations
A1.AREI.5	Justify that the solution to a system of linear equations is not changed when one of the equations is replaced by a linear combination of the other equation.	2: Exploring Constant Change	3: Systems of Equations and Inequalities	2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations (M2-155-M2-168)	2: Exploring Constant Change	4: Systems of Linear Equations	2: Solving Linear Systems Using Linear Combinations

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A1.AREI.6	Solve systems of linear equations algebraically and graphically focusing on pairs of linear equations in two variables.	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations (M2-139-M2-154) 2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations (M2-155-M2-168) 5: Working the System: Solving Systems of Equations and Inequalities (M2-199 - M2-208)	2: Exploring Constant Change	4: Systems of Linear Equations	1: Representing Systems of Linear Functions 3: Solving Linear Systems Using Any Method
A1.AREI.6.a	Solve systems of linear equations using the substitution method.	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations (M2-139-M2-154) 5: Working the System: Solving Systems of Equations and Inequalities (M2-199 - M2-208)			
A1.AREI.6.b	Solve systems of linear equations using linear combination.	2: Exploring Constant Change	3: Systems of Equations and Inequalities	2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations (M2-155-M2-168)			

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A1.AREI.10	Explain that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane.	1: Searching For Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7 - M1-20)			
		2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40)	2: Exploring Constant Change	1: Linear Function Overview	4: Exploring Graphs of Linear Functions
			3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations (M2-139-M2-154)			
			4: Functions Derived From Linear Relationships	5: A Riddle Wrapped in a Mystery: Inverses of Linear Functions (M2-277-M2-290)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: A Constant Ratio: Geometric Sequences and Exponential Functions (M3-7-M3-22)			
			2: Using Exponential Equations	2: Powers and the Horizontal Line: Interpreting Parameters in Context (M3-93- M3-102)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions (M4-7-M4-22)			
			2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140)			

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A1.AREI.11	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 $y = g(x)$. (Limit to linear; quadratic; exponential.)	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations (M2-139-M2-154)	2: Exploring Constant Change	4: Systems of Linear Equations	1: Representing Systems of Linear Functions
			4: Functions Derived From Linear Relationships	2: Play Ball! : Absolute Value Equations and Inequalities (M2-237-M2-250)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	2: Powers and the Horizontal Line: Interpreting Parameters in Context (M3-93-M3-102)	4: Maximizing and Minimizing	7: Quadratic Equation Solving	1: Making Sense of Roots and Zeros
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions (M4-7-M4-22)			
A1.AREI.12	Graph the solutions to a linear inequality in two variables.	2: Exploring Constant Change	3: Systems of Equations and Inequalities	3: Throwing Shade: Graphing Inequalities in Two Variables (M2-169-M2-184) 4: Working with Constraints: Systems of Linear Inequalities (M2-185-M2-198) 5: Working the System: Solving Systems of Equations and Inequalities (M2-199 - M2-208)	2: Exploring Constant Change	5: Linear Inequalities in Two Variables	1: Graphing Linear Inequalities In Two Variables 2: Systems of Linear Inequalities

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A1.ASE.1	Interpret the meanings of coefficients, factors, terms, and expressions based on their real-world contexts. Interpret complicated expressions as being composed of simpler expressions.	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Equations	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46) 4: You Lose Some, You Lose Some: Comparing Functions Using Key Characteristics and Average Rate of Change (M4-73-M4-88)			
			2: Solving Quadratic Equations	1: This Time, with Polynomials: Adding, Subtracting and Multiplying Polynomials (M4-101-M4-126) 5: Ladies and Gentlemen, Please Welcome the Quadratic Formula: The Quadratic Formula (M4-175-M4-196)			
A1.ASE.2	Analyze the structure of binomials, trinomials, and other polynomials in order to rewrite equivalent expressions.	4: Maximizing and Minimizing	2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140) 3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form (M4-141-M4-152)			
A1.ASE.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.				4: Maximizing and Minimizing	6: Forms of Quadratics	2: Converting Quadratics to General Form 3: Converting Quadratics to Factored Form 4: Converting Quadratics to Vertex Form

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A1.ASE.3.a	Find the zeros of a quadratic function by rewriting it in equivalent factored form and explain the connection between the zeros of the function, its linear factors, the x-intercepts of its graph, and the solutions to the corresponding quadratic equation.	4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46) 3: More Than Meets the Eye (M4-47-M4-72)			
			2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140) 3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form (M4-141-M4-152) 4: The Missing Link: Factoring and Completing the Square (M4-153-M4-174)	4: Maximizing and Minimizing	7: Quadratic Equation Solving	1: Making Sense of Roots and Zeros

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A1.FBF.3	Describe the effect of the transformations $kf(x)$, $f(x) + k$, $f(x + k)$, and combinations of such transformations on the graph of $y = f(x)$ 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. (Limit to linear; quadratic; exponential with integer exponents; vertical shift and vertical stretch.)	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40)	2: Exploring Constant Change	1: Linear Function Overview	3: Exploring Graphs of Linear Functions	
				3: Get Your Move On: Transforming Linear Functions (M2-41-M2-58)	3: Investigating Growth and Decay	3: Linear and Exponential Transformations	1: Introduction to Transforming Exponential Functions 2: Shifting Vertically 3: Reflecting and Dilating using Graphs 4: Shifting Horizontally 5: Transforming Using Tables of Values 6: Using Multiple Transformations	
		3: Investigating Growth and Decay	4: Functions Derived From Linear Relationships	1: Putting the V in Absolute Value: Defining Absolute Value Functions and Transformations (M2-219-M2-236)				
				3: I Graph in Pieces: Linear Piecewise Functions (M2-251 - M2-264)	4: Maximizing and Minimizing	3: Linear and Quadratic Transformations	1: Shifting Vertically 2: Reflecting and Dilating using Graphs 3: Shifting Horizontally 4: Transforming Using Tables of Values 5: Using Multiple Transformations	
4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	3: More Than Meets the Eye (M4-47-M4-72)						

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A1.FIF.1	Extend previous knowledge of a function to apply to general behavior and features of a function.	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7-M1-20)	1: Searching for Patterns	1: Function Overview	2: Introduction to Function Families
				2: Exploring Constant Change	2: Exploring Constant Change	1: Linear Function Overview	4: Exploring Graphs of Linear Functions 5: Identifying Key Characteristics of Graphs of Functions
		2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7-M2-22)			
			4: Functions Derived From Linear Relationships	5: A Riddle Wrapped in a Mystery: Inverses of Linear Functions (M2-277-M2-290)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: A Constant Ratio: Geometric Sequences and Exponential Functions (M3-7-M3-22)			
A1.FIF.1.a	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range.	1: Searching for Patterns	1: Quantities and Relationships	3: F of X: Recognizing Functions and Function Families (M1-39-M1-62)			
			2: Sequences	1: Is there a Pattern Here? : Recognizing Patterns and Sequences (M1-87-M1-102) 2: The Password is ... Operation! : Arithmetic and Geometric Sequences (M1-103-M1-134)			

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A1.FIF.1.b	Represent a function using function notation and explain that $f(x)$ denotes the output of function f that corresponds to the input x .	1: Searching for Patterns	1: Quantities and Relationships	3: F of X: Recognizing Functions and Function Families (M1-39 - M1-62)			
		2: Exploring Constant Change	1: Linear Functions	1: Connect the Dots: Making Connections Between Arithmetic and Geometric Sequences and Linear Functions (M2-7-M2-22)			
			4: Functions Deriving From Linear Relationships	3: I Graph in Pieces: Linear Piecewise Functions (M2-251- M2-264) 4: Step by Step: Step Functions (M2-265 - M2-276)			
A1.FIF.1.c	Understand that the graph of a function labeled as f is the set of all ordered pairs (x, y) that satisfy the equation $y = f(x)$.	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7 - M1-20) 3: F of X: Recognizing Functions and Function Families (M1-39 - M1-62)			
		2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7 - M2-22)			
			4: Functions Derived From Linear Relationships	3: I Graph in Pieces: Linear Piecewise Functions (M2-251 - M2-264)			

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A1.FIF.2	Evaluate functions and interpret the meaning of expressions involving function notation from a mathematical perspective and in terms of the context when the function describes a real-world situation.	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40)	2: Exploring Constant Change	1: Linear Function Overview	3: Evaluating Linear Functions
			4: Functions Derived From Linear Relationships	3: I Graph in Pieces: Linear Piecewise Functions (M2-251 - M2-264) 4: Step by Step: Step Functions (M2-265 - M2-276)			
A1.FIF.3					2: Exploring Constant Change	1: Linear Function Overview	1: Writing Sequences as Linear Functions
					3: Investigating Growth and Decay	1: Exponential Functions	1: Writing Sequences as Exponential Functions

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A1.FIF.4	Interpret key features of a function that models the relationship between two quantities when given in graphical or tabular form. Sketch the graph of a function from a verbal description showing key features. Key features include intercepts; intervals where the function is increasing, decreasing, constant, positive, or negative; relative maximums and minimums; symmetries; end behavior and periodicity. (Limit to linear; quadratic; exponential.)	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7 - M1-20) 2: A Sort of Sorts: Analyzing and Sorting Graphs (M1-21-M1-38) 3: F of X: Recognizing Functions and Function Families (M1-39 - M1-62) 4: Function Families fro 200, Alex: Recognizing Functions by Characteristics (M1-63 - M1 - 75)	3: Investigating Growth and Decay	1: Exponential Functions	2: Introduction to Exponential Functions
		2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40) 3: Get Your Move On: Transforming Linear Functions (M2-41-M2-58)			
			4: Functions Derived From Linear Relationships	3: I Graph in Pieces: Linear Piecewise Functions (M2-251 - M2-264)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	3: Now I Know My A, B, C, Ds: Transformations of Exponential Functions (M3-45-M3-69)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions (M4-7-M4-22) 2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46)	4: Maximizing and Minimizing	2: Quadratic Models in General Form	1: Modeling Projectile Motion 2: Recognizing Key Features of Vertical Motion Graphs

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A1.FIF.5	Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes. (Limit to linear; quadratic; exponential.)	1: Searching for Patterns	1: Quantities and Relationships	3: F of X: Recognizing Functions and Function Families (M1-39 - M1-62)	3: Investigating Growth and Decay	1: Exponential Functions	3: Relating the Domain to Exponential Functions
			2: Sequences	1: Is there a Pattern Here? : Recognizing Patterns and Sequences (M1-87-M1-102) 2: The Password is ... Operation! : Arithmetic and Geometric Sequences (M1-103-M1-134)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions (M4-7-M4-22)			
A1.FIF.6	Given a function in graphical, symbolic, or tabular form, determine the average rate of change of the function over a specified interval. Interpret the meaning of the average rate of change in a given context (Limit to linear; quadratic; exponential.)	2 Exploring Constant Change	1 Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7 - M2-22)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46)	2: Exploring Constant Change	1: Linear Function Overview	2: Understanding Linear Functions
				4: You Lose Some, You Lose Some: Multiple Representations of Quadratic Functions (M4-73- M4-88)	3: Investigating Growth and Decay	2: Exponential Functions	5: Calculating and Interpreting Average Rate of Change

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A1.FIF.7	Graph functions from their symbolic representations. Indicate key features including intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior and periodicity. Graph simple cases by hand and use technology for complicated cases. (Limit to linear; quadratic; exponential only in the form $y = ax + k$.)	2: Exploring Constant Change	1: Linear Functions	3: Get Your Move On: Transforming Linear Functions (M2-41-M2-58)	4: Maximizing and Minimizing	6: Forms of Quadratics	5: Sketching Quadratic Functions
			4: Functions Derived From Linear Functions	1: Putting the V in Absolute Value: Defining Absolute Value Functions and Transformations (M2-219-M2-236) 2: Play Ball! : Absolute Value Equations and Inequalities (M2-237 - M2-250) 3: I Graph in Pieces: Linear Piecewise Functions (M2-251 - M2-264) 4: Step by Step: Step Functions (M2-265 - M2-276) 5: A Riddle Wrapped in a Mystery: Inverses of Linear Functions (M2-277-M2-290)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	3: Now I Know My A, B, C, Ds: Transformations of Exponential Functions (M3-45-M3-69)	2: Exploring Constant Change	7: Graphs of Piecewise Functions	1: Introduction to Piecewise Functions 2: Graphing Linear Piecewise Functions 3: Interpreting Piecewise Functions 4: Using Linear Piecewise Functions 5: Analyzing Step Functions
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions (M4-7-M4-22) 2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46)			

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A1.FIF.8.a	Translate between different but equivalent forms of a function equation to reveal and explain different properties of the function. a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context (Limit to linear; quadratic; exponential.)	4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions (M4-23-M4-46)	4: Maximizing and Minimizing	5: Quadratic Expression Factoring	3: Factoring Trinomials with Coefficients of One 4: Factoring Trinomials with Coefficients other Than One 5: Factoring Using Difference of Squares 6: Factoring Quadratic Expressions 7: Completing the Square
			2: Quadratic Equation Solving	4: The Missing Link: Factoring and Completing the Square (M4-153-M4-174)		6: Forms of Quadratics	1: Identifying Properties of Quadratic Functions 2: Converting Quadratics to General Form 3: Converting Quadratics to Factored Form 4: Converting Quadratics to Vertex Form
A1.FIF.9	Compare properties of two functions given in different representations such as algebraic, graphical, tabular, or verbal. (Limit to linear; quadratic; exponential.)	2: Exploring Constant Change	1: Linear Functions	4: Connect Four: Comparing Linear Functions in Different Forms (M2-59-M2-67)	2: Exploring Constant Change	1: Linear Function Overview	6: Comparing Linear Functions in Different Forms
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	4: You Lose Some, You Lose Some: Comparing Functions Using Key Characteristics and Average Rate of Change (M4-73-M4-88)	3: Investigating Growth and Decay	2: Exponential Functions	5: Comparing Exponential Functions in Different Forms
					4: Maximizing and Minimizing	6: Forms of Quadratics	6: Comparing Quadratic Functions in Different Forms
A1.FLQE.1a	Distinguish between situations that can be modeled with linear functions or exponential functions by recognizing situations in which one quantity changes at a constant rate per unit interval as opposed to those in which a quantity changes by a constant percent rate per unit interval. a. Prove that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.	2 Exploring Constant Change	1 Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7-M2-22)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: A Constant Ratio: Geometric Sequences and Exponential Functions (M3-7-M3-22)			

SCCCR	Description	Textbook Module	Textbook Topic	Textbook Lesson Title	MATHia Module	MATHia Unit	MATHia Workspace
A1.FLQE.2	Create symbolic representations of linear and exponential functions, including arithmetic and geometric sequences, given graphs, verbal descriptions, and tables. (Limit to linear; exponential.)	Module 1 Searching For Patterns	2: Sequences	1: Is there a Pattern Here? : Recognizing Patterns and Sequences (M1-87-M1-102) 2: The Password is ... Operation! : Arithmetic and Geometric Sequences (M1-103-M1-134) 3: Did You Mean Recursion? : Determining Recursive and Explicit Expressions from Contexts (M1-135 - M1-146) 4: 3 Pegs, N Discs: Modeling Using Sequences (M1-147 - M1-158)			
		2 Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7 - M2-22)			
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: A Constant Ratio: Geometric Sequences and Exponential Functions (M3-7-M3-22) 2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44)			
A1.FLQE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or more generally as a polynomial function.	2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions (M2-7 - M2-22)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92)			
		4: Maximizing and Minimizing	1: Introduction to Quadratic Functions	4: You Lose Some, You Lose Some: Comparing Functions Using Key Characteristics and Average Rate of Change (M4-73-M4-88)			

SCCCR	Description	Textbook Module	Textbook Topic	Textbook Lesson Title	MATHia Module	MATHia Unit	MATHia Workspace
A1.FLQE.5	Interpret the parameters in a linear or exponential function in terms of the context.	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: A Constant Ratio: Geometric Sequences and Exponential Functions (M3-7-M3-22)			
			2: Using Exponential Equations	1: Uptown and Downtown: Exponential Equations for Growth and Decay (M3-81-M3-92) 2: Powers and the Horizontal Line: Interpreting Parameters in Context (M3-93- M3-102)			
A1.NQ.1	Use units of measurement to guide the solution of multi-step tasks. Choose and interpret appropriate labels, units, and scales when constructing graphs and other data displays.	1: Searching For Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7-M1-20)			
		2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of Linear Functions (M2-23 - M2-40)			
				4: Connect Four: Comparing Linear Functions in Different Forms (M2-59 - M2-67)			
			2: Solving Linear Equations and Inequalities	2: It's Literally About Literal Equations: Literal Equations (M2-91 - M2-102)			
A1.NQ.2	Label and define appropriate quantities in descriptive modeling contexts.	1: Searching For Patterns	1: Quantities and Relationships	1: A Picture is Worth a Thousand Words: Understanding Quantities and Their Relationships (M1-7-M1-20)			
		3: Investigating Growth and Decay	2: Using Exponential Equations	3: Savings, Tea, and Carbon Dioxide: Modeling Exponential Functions (M3-103-M3-114) 4: BAC is BAD News: Choosing a Function to Model BAC (M3-115 - M3-124)	1: Searching For Patterns	1: Function Overview	1: Identifying Quantities

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A1.NQ.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities in context.	1: Searching for Patterns	3: Linear Regressions	1: Like a Glove: Least Squares Regressions (M1-167-M1-180) 2: Gotta Keep It Correlatin' : Correlation (M1-181 - M1-196) 4: To Fit or Not to Fit? That is the Question! : Using Residual Plots (M1-211 - M1-222)			
		2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	3: Not All Statements Are Made Equal: Modeling Linear Inequalities (M2-103-M2-116) 4: Don't Confound Your Compounds: Solving and Graphing Compound Inequalities (M2-117 - M2-130)			
			3: Systems of Equations and Inequalities	3: Throwing Shade: Graphing Inequalities in Two Variables (M2-169-M2-184) 4: Working with Constraints: Graphing a System of Linear Inequalities (M2-185 - M2-198)			
		3: Investigating Growth and Decay	2: Using Exponential Functions	1: Uptown and Downtown: Equations for Growth and Decay (M3-81-M3-92)			

SCCCR	Description	Textbook Module	Textbook Topic	Textbook Lesson Title	MATHia Module	MATHia Unit	MATHia Workspace
A1.NRNS.1	Rewrite expressions involving simple radicals and rational exponents in different forms	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44) 3: Now I Know My A, B, C, Ds: Transformations of Exponential Functions (M3-45-M3-69)	3: Investigating Growth and Decay	2: Rational Exponents	1: Properties of Rational Exponents
		4: Maximizing and Minimizing	2: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations (M4-127-M4-140) 5: Ladies and Gentlemen, Please Welcome the Quadratic Formula: The Quadratic Formula (M4-175-M4-196)			
A1.NRNS.2	Use the definition of the meaning of rational exponents to translate between rational exponent and radical forms.	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44)	3: Investigating Growth and Decay	2: Rational Exponents	2: Rewriting Expressions with Radical and Rational Exponents
A1.NRNS.3	Explain why the sum or product of 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.	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: The Power Within: Rational Exponents and Graphs of Exponential Functions (M3-23-M3-44)			
		4: Maximizing and Minimizing	2: Solving Quadratic Equations	5: Ladies and Gentlemen Please Welcome the Quadratic Formula: The Quadratic Formula (M4-175-M4-196)			

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A1.SPID.6	Using technology, create scatterplots and analyze those plots to compare the fit of linear, quadratic, or exponential models to a given data set. Select the appropriate model, fit a function to the data set, and use the function to solve problems in the context of the data.	1: Searching For Patterns	3: Linear Regression	1: Like a Glove: Least Squares Regressions (M1-167-M1-180) 2: Gotta Keep It Correlatin' : Correlation (M1-181 - M1-196) 3: The Residual Effect: Creating Residual Plots (M1-197 - M1-210) 4: To Fit or Not to Fit? That is the Question! : Using Residual Plots (M1-211 - M1-222)	1: Searching For Patterns	3: Linear Regression	1: Exploring Linear Regression 2: Using Linear Regression
		3: Investigating Growth and Decay	2: Using Exponential Equations	3: Savings, Tea, and Carbon Dioxide: Modeling Using Exponential Functions (M3-103 - M3-114) 4: BAC is BAD News: Choosing a Function to Model BAC (M3-115 - M3-124)			
A1.SPID.7	Create a linear function to graphically model data from a real-world problem and interpret the meaning of the slope and intercept(s) in the context of the given problem.	1: Searching For Patterns	3: Linear Regression	1: Like a Glove: Least Squares Regressions (M1-167-M1-180)	1: Searching For Patterns	3: Linear Regression	1: Exploring Linear Regression 3: Interpreting Lines of Best Fit
A1.SPID.8	Using technology, compute and interpret the correlation coefficient of a linear fit.	1: Searching For Patterns	3: Linear Regression	2: Gotta Keep It Correlatin' : Correlation (M1-181 - M1-196)	1: Searching For Patterns	3: Linear Regression	3: Interpreting Lines of Best Fit
N.CN.1		4: Maximizing and Minimizing			4: Maximizing and Minimizing	8: Operations with Complex Numbers	1: Introduction to Complex Numbers 2: Simplifying Radicals with Negative Radicands 3: Simplifying Powers of i

SCCCR	Description	Textbook Module	Textbook Topic	Textbook Lesson Title	MATHia Module	MATHia Unit	MATHia Workspace
N.CN.2		4: Maximizing and Minimizing			4: Maximizing and Minimizing	8: Operations with Complex Numbers	4: Adding and Subtracting Complex Numbers 5: Multiplying Complex Numbers 6: Solving Quadratic Equations with Complex Roots
N.CN.7							