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Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.N-RN.2	Rewrite algebraic expressions with integer exponents using the properties of exponents.	Course 3 Textbook	5: Applying Powers	1: Exponents and Scientific Notation	1: It's a Generational Thing: Properties of Powers with Integer Exponents pp. M5-7A–M5-28 2: Show What You Know: Analyzing Properties of Powers pp. M5-29A–M5-42
		Integrated Math II Textbook	4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
NC.M1.A-SSE.1	Interpret expressions that represent a quantity in terms of its context.	Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	3: Just So . . . Basic: Horizontal Dilations of Exponential Functions pp. M3-119A–M3-132
NC.M1.A-SSE.1a	Identify and interpret parts of a linear, exponential, or quadratic expression, including terms, factors, coefficients, and exponents.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of a Linear Function pp. M2-23A–M2-40
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22
		Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	3: Just So . . . Basic: Horizontal Dilations of Exponential Functions pp. M3-119A–M3-132
			3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
4: Seeing Structure	1: Solving Quadratic Equations	1: This Time, With Polynomials: Adding, Subtracting, and Multiplying Polynomials pp. M4-7A–M4-32			
NC.M1.A-SSE.1b	Interpret a linear, exponential, or quadratic expression made of multiple parts as a combination of entities to give meaning to an expression.	Integrated Math I Textbook	3: Investigating Growth and Decay	2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76
		Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	3: Just So . . . Basic: Horizontal Dilations of Exponential Functions pp. M3-119A–M3-132 2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
NC.M1.A-SSE.3	Write an equivalent form of a quadratic expression $ax^2 + bx + c$ where a is an integer, by factoring to reveal the solutions of the equation or the zeros of the function the expression defines.	Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-SSE.3	Write an equivalent form of a quadratic expression $ax^2 + bx + c$ where a is an integer, by factoring to reveal the solutions of the equation or the zeros of the function the expression defines.	Integrated Math II Textbook	4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
					4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80
		Integrated Math II MATHia Software	4: Seeing Structure	2: Quadratic Expression Factoring	3: Factoring Trinomials with Coefficients of One
					4: Factoring Trinomials with Coefficients Other Than One
					6: Factoring Quadratic Expressions
					3: Converting Quadratics to General Form
3: Forms of Quadratics	4: Converting Quadratics to Factored Form				
NC.M1.A-APR.1	Build an understanding that operations with polynomials are comparable to operations with integers by adding and subtracting quadratic expressions and by adding, subtracting, and multiplying linear expressions.	Integrated Math II Textbook	4: Seeing Structure	1: Solving Quadratic Equations	1: This Time, With Polynomials: Adding, Subtracting, and Multiplying Polynomials pp. M4-7A–M4-32
					Integrated Math II MATHia Software
		2: Adding Polynomials			
		3: Subtracting Polynomials			
		4: Using a Factor Table to Multiply Polynomials			
		5: Multiplying Polynomials			
		1: Using a Factor Table to Multiply Binomials			
		2: Multiplying Binomials			
NC.M1.A-APR.3	Understand the relationships among the factors of a quadratic expression, the solutions of a quadratic equation, and the zeros of a quadratic function.	Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-CED.1	Create equations and inequalities in one variable that represent linear, exponential, and quadratic relationships and use them to solve problems.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of a Linear Function pp. M2-23A–M2-40
				2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations pp. M2-97A–M2-108A
			3: Not All Statements Are Made Equal: Modeling Linear Inequalities pp. M2-121A–M2-134		
			4: Don't Confound Your Compounds: Solving and Graphing Compound Inequalities pp. M2-135A–M2-148		
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: To the What?: Comparing Exponential Functions pp. M3-23A–M3-34
				2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76
		2: The Horizontal Line and Powers: Interpreting Parameters in Context pp. M3-77A–M3-86			
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
		Integrated Math I MATHia Software	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 Equations Using Multiple Representations		
		3: Investigating Growth and Decay	5: Solving Exponential Equations	1: Solving Exponential Equations Using a Graph	
2: Solving Contextual Exponential Equations Using Common Bases					
3: Solving Complex Exponential Equations Using Common Bases					
Integrated Math II MATHia	3: Exploring Functions	6: Quadratic Models in Factored Form	1: Modeling Area as Product of Monomial and Binomial		
			2: Modeling Area as Product of Two Binomials		

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-CED.2	Create and graph equations in two variables to represent linear, exponential, and quadratic relationships between quantities.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations pp. M2-157A–M2-172
					2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations pp. M2-173A–M2-186
					3: Throwing Shade: Graphing Inequalities in Two Variables pp. M2-187A–M2-202
			3: Investigating Growth and Decay	2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76
					2: The Horizontal Line and Powers: Interpreting Parameters in Context pp. M3-77A–M3-86
NC.M1.A-CED.3	Create systems of linear equations and inequalities to model situations in context.	Integrated Math I Textbook	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	3: Not All Statements Are Made Equal: Modeling Linear Inequalities pp. M2-131A–M2-134
				3: Systems of Equations and Inequalities	3: Throwing Shade: Graphing Inequalities in Two Variables pp. M2-187A–M2-202
					4: Working with Constraints: Systems of Linear Inequalities pp. M2-203A–M2-216
					5: Working the System: Solving Systems of Equations and Inequalities pp. M2-217A–M2-226
					6: Take It to the Max...or Min: Linear Programming pp. M2-227A–M2-236
NC.M1.A-CED.4	Solve for a quantity of interest in formulas used in science and mathematics using the same reasoning as in solving equations.	Integrated Math I Textbook	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	2: It's Literally About Literal Equations: Literal Equations pp. M2-109A–M2-120
		Integrated Math II Textbook	4: Seeing Structure	1: Solving Quadratic Equations	4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80
NC.M1.A-REI.1	Justify a chosen solution method and each step of the solving process for linear and quadratic equations using mathematical reasoning.	Integrated Math I Textbook	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations pp. M2-97A–M2-108A

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-REI.3	Solve linear equations and inequalities in one variable.	Integrated Math I Textbook	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations pp. M2-97A–M2-108A 3: Not All Statements Are Made Equal: Modeling Linear Inequalities pp. M2-121A–M2-134 4: Don't Confound Your Compounds: Solving and Graphing Compound Inequalities pp. M2-135A–M2-148
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	2: To the What?: Comparing Exponential Functions pp. M3-23A–M3-34
		Integrated Math I MATHia	2: Exploring Constant Change	3: Linear Inequalities	1: Graphing Inequalities
					2: Solving Two-Step Linear Inequalities 3: Representing Compound Inequalities
NC.M1.A-REI.4	Solve for the real solutions of quadratic equations in one variable by taking square roots and factoring.	Integrated Math II Textbook	4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
		Integrated Math II MATHia Software	4: Seeing Structure	4: Quadratic Equation Solving	2: Solving Quadratic Equations by Factoring
NC.M1.A-REI.5	Explain why replacing one equation in a system of linear equations by the sum of that equation and a multiple of the other produces a system with the same solutions.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations pp. M2-173A–M2-186
		Integrated Math I MATHia Software	2: Exploring Constant Change	4: Systems of Linear Equations	2: Solving Linear Systems Using Linear Combinations
NC.M1.A-REI.6	Use tables, graphs, or algebraic methods (substitution and elimination) to find approximate or exact solutions to systems of linear equations and interpret solutions in terms of a context.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations pp. M2-157A–M2-172

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-REI.6	Use tables, graphs, or algebraic methods (substitution and elimination) to find approximate or exact solutions to systems of linear equations and interpret solutions in terms of a context.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	2: The Elimination Round: Using Linear Combinations to Solve a System of Linear Equations pp. M2-173A–M2-186
		Integrated Math I MATHia Software	2: Exploring Constant Change	4: Systems of Linear Equations	5: Working the System: Solving Systems of Equations and Inequalities pp. M2-217A–M2-226
NC.M1.A-REI.10	Understand that the graph of a two variable equation represents the set of all solutions to the equation.	Integrated Math I Textbook	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture Is Worth a Thousand Words: Understanding Quantities and Their Relationships pp. M1-7A–M1-20
			2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of a Linear Function pp. M2-23A–M2-40
				3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations pp. M2-157A–M2-172
		3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22	
			2: Using Exponential Equations	2: The Horizontal Line and Powers: Interpreting Parameters in Context pp. M3-77A–M3-86	
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions pp. M3-151A–M3-166
			4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
		Integrated Math I MATHia Software	2: Exploring Constant Change	1: Linear Function Overview	4: Exploring Graphs of Linear Functions

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.A-REI.11	Build an understanding of why the x-coordinates of the points where the graphs of two linear, exponential, and/or quadratic equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ and approximate solutions using graphing technology or successive approximations with a table of values.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations pp. M2-157A–M2-172
			3: Investigating Growth and Decay	2: Using Exponential Equations	6: Take It to the Max...or Min: Linear Programming pp. M2-227A–M2-236
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: The Horizontal Line and Powers: Interpreting Parameters in Context pp. M3-77A–M3-86
		Integrated Math I MATHia Software	2: Exploring Constant Change	4: Systems of Linear Equations	1: Up and Down or Down and Up: Exploring Quadratic Functions pp. M3-151A–M3-166
			3: Investigating Growth and Decay	5: Solving Exponential Equations	1: Representing Systems of Linear Functions
		Integrated Math II MATHia Software	4: Seeing Structure	4: Quadratic Equation Solving	1: Solving Exponential Equations Using a Graph
NC.M1.A-REI.12	Represent the solutions of a linear inequality or a system of linear inequalities graphically as a region of the plane.	Integrated Math I Textbook	2: Exploring Constant Change	3: Systems of Equations and Inequalities	3: Throwing Shade: Graphing Inequalities in Two Variables pp. M2-187A–M2-202
					4: Working with Constraints: Systems of Linear Inequalities pp. M2-203A–M2-216
					5: Working the System: Solving Systems of Equations and Inequalities pp. M2-217A–M2-226
					6: Take It to the Max...or Min: Linear Programming pp. M2-227A–M2-236
		Integrated Math I	2: Exploring Constant Change	5: Linear Inequalities in Two Variables	1: Graphing Linear Inequalities
			2: Systems of Linear Inequalities		

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.F-IF.1	<p>Build an understanding 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 by recognizing that:</p> <ul style="list-style-type: none"> if f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. the graph of f is the graph of the equation $y = f(x)$. 	Integrated Math I Textbook	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture Is Worth a Thousand Words: Understanding Quantities and Their Relationships pp. M1-7A–M1-20
			2: Exploring Constant Change	1: Linear Functions	3: G of X: Recognizing Functions and Function Families pp. M1-39A–M1-60
		Integrated Math I MATHia Software	1: Searching for Patterns	1: Function Overview	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions pp. M2-7A–M2-22
			2: Exploring Constant Change	1: Linear Function Overview	2: Introduction to Function Families
					2: Understanding Linear Functions
5: Identifying Key Characteristics of Graphs of Functions					
NC.M1.F-IF.2	Use function notation to evaluate linear, quadratic, and exponential functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of a Linear Function pp. M2-23A–M2-40
				3: Systems of Equations and Inequalities	6: Take It to the Max...or Min: Linear Programming pp. M2-227A–M2-236
		Integrated Math I MATHia Software	2: Exploring Constant Change	1: Linear Function Overview	3: Evaluating Linear Functions
NC.M1.F-IF.3	Recognize that recursively and explicitly defined sequences are functions whose domain is a subset of the integers, the terms of an arithmetic sequence are a subset of the range of a linear function, and the terms of a geometric sequence are a subset of the range of an exponential function.	Integrated Math I Textbook	1: Searching for Patterns	2: Sequences	1: Is There a Pattern Here?: Recognizing Patterns and Sequences pp. M1-83A–M1-98
			2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions pp. M2-7A–M2-22
		Integrated Math I MATHia Software	1: Searching for Patterns	2: Sequences	1: Describing Patterns in Sequences
			2: Exploring Constant Change	1: Linear Function Overview	2: Writing Recursive Formulas
			3: Investigating Growth and Decay	1: Exponential Functions	1: Writing Sequences as Linear Functions
1: Writing Sequences as Exponential Functions					

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NC.M1.F-IF.4	Interpret key features of graphs, tables, and verbal descriptions in context to describe functions that arise in applications relating two quantities, including: intercepts; intervals where the function is increasing, decreasing, positive, or negative; and maximums and minimums.	Integrated Math I Textbook	1: Searching for Patterns	1: Quantities and Relationships	1: A Picture Is Worth a Thousand Words: Understanding Quantities and Their Relationships pp. M1-7A–M1-20
					2: A Sort of Sorts: Analyzing and Sorting Graphs pp. M1-21A–M1-38
					3: G of X: Recognizing Functions and Function Families pp. M1-39A–M1-60
					4: Function Families for 800, Alex: Recognizing Functions by Characteristics pp. M1-61A–M1-72
		Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	2: Fun with Functions, Linear Ones: Making Sense of Different Representations of a Linear Function pp. M2-23A–M2-40
					3: Move It!: Transforming Linear Functions pp. M2-41A–M2-60
					3: My A, B, C, Ds: Transformations of Exponential Functions pp. M3-35A–M3-57
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions pp. M3-151A–M3-166
					2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
Integrated Math I MATHia Software	3: Investigating Growth and Decay	1: Exponential Functions	2: Introduction to Exponential Functions		

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.F-IF.5	Interpret a function in terms of the context by relating its domain and range to its graph and, where applicable, to the quantitative relationship it describes.	Integrated Math I Textbook	1: Searching for Patterns	1: Quantities and Relationships	3: G of X: Recognizing Functions and Function Families pp. M1-39A–M1-60
				2: Sequences	1: Is There a Pattern Here?: Recognizing Patterns and Sequences pp. M1-83A–M1-98
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions pp. M3-151A–M3-166
		Integrated Math I MATHia Software	3: Investigating Growth and Decay	1: Exponential Functions	3: Relating the Domain to Exponential Functions
NC.M1.F-IF.6	Calculate and interpret the average rate of change over a specified interval for a function presented numerically, graphically, and/or symbolically.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions pp. M2-7A–M2-22
			3: Investigating Growth and Decay	2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76
		Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
		Integrated Math I MATHia Software	2: Exploring Constant Change	1: Linear Function Overview	2: Understanding Linear Functions
			3: Investigating Growth and Decay	1: Exponential Functions	5: Calculating and Interpreting Average Rate of Change

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1-F-IF.7	Analyze linear, exponential, and quadratic functions by generating different representations, by hand in simple cases and using technology for more complicated cases, to show key features, including: domain and range; rate of change; intercepts; intervals where the function is increasing, decreasing, positive, or negative; maximums and minimums; and end behavior.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	3: Move It!: Transforming Linear Functions pp. M2-41A–M2-60
				3: Systems of Equations and Inequalities	1: Double the Fun: Introduction to Systems of Equations pp. M2-157A–M2-172
		Integrated Math II Textbook	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22
				3: Exploring Functions	3: Introduction to Quadratic Functions
NC.M1-F-IF.8a	Rewrite a quadratic function to reveal and explain different key features of the function	Integrated Math II Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	1: Up and Down or Down and Up: Exploring Quadratic Functions pp. M3-151A–M3-166
			4: Seeing Structure	1: Solving Quadratic Equations	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
		Integrated Math II MATHia Software	4: Seeing Structure	3: Forms of Quadratics	4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80
NC.M1-F-IF.8b	Interpret and explain growth and decay rates for an exponential function.	Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	3: Converting Quadratics to General Form
		Integrated Math I MATHia Software	3: Investigating Growth and Decay	1: Exponential Functions	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
NC.M1-F-IF.9	Compare key features of two functions (linear, quadratic, or exponential) each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	4: Using the Properties of Exponents
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	5: Making a Connection: Comparing Linear Functions in Different Forms pp. M2-73A–M2-83
					2: To the What?: Comparing Exponential Functions pp. M3-23A–M3-34

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.F-IF.9	Compare key features of two functions (linear, quadratic, or exponential) each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).	Integrated Math I MATHia Software	2: Exploring Constant Change	1: Linear Function Overview	6: Comparing Linear Functions in Different Forms
			3: Investigating Growth and Decay	1: Exponential Functions	6: Comparing Exponential Functions in Different Forms
NC.M1.F-BF.1a	Build linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two ordered pairs (include reading these from a table).	Integrated Math I Textbook	1: Searching for Patterns	2: Sequences	1: Is There a Pattern Here?: Recognizing Patterns and Sequences pp. M1-83A–M1-98 3: Did You Mean: Recursion?: Determining Recursive and Explicit Expressions from Contexts pp. M1-131–M1-142
			2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions pp. M2-7A–M2-22
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22 2: To the What?: Comparing Exponential Functions pp. M3-23A–M3-34
			Integrated Math I	1: Searching for Patterns	2: Sequences
		NC.M1.F-BF.1b	Build a function that models a relationship between two quantities by combining linear, exponential, or quadratic functions with addition and subtraction or two linear functions with multiplication.	Integrated Math I Textbook	3: Investigating Growth and Decay
NC.M1.F-BF.1b		Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	4: Saving Strategies: Modeling with and Combining Function Types pp. M3-133–M3-142
			4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
NC.M1.F-BF.2	Translate between explicit and recursive forms of arithmetic and geometric sequences and use both to model situations.	Integrated Math I Textbook	1: Searching for Patterns	2: Sequences	2: The Password Is: Operations: Arithmetic and Geometric Sequences pp. M1-99A–M1-130
					4: 3 Pegs, N Discs: Modeling Using Sequences pp. M1-143A–M1-154

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.F-LE.1	Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	1: Connecting the Dots: Making Connections Between Arithmetic Sequences and Linear Functions pp. M2-7A–M2-22
			3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22
		Integrated Math II Textbook		3: Exploring Functions	2: Exponentials
			Integrated Math I	3: Investigating Growth and Decay	4: Comparing Linear and Exponential Models
NC.M1.F-LE.3	Compare the end behavior of linear, exponential, and quadratic functions using graphs and tables to show that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically.	Integrated Math I Textbook	3: Investigating Growth and Decay	2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76
		Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
NC.M1.F-LE.5	Interpret the parameters a and b in a linear function $f(x) = ax + b$ or an exponential function $g(x) = ab^x$ in terms of a context.	Integrated Math I Textbook	3: Investigating Growth and Decay	1: Introduction to Exponential Functions	1: Constant Ratios: Geometric Sequences and Exponential Functions pp. M3-7A–M3-22
				2: Using Exponential Equations	1: Downtown and Uptown: Exponential Equations for Growth and Decay pp. M3-67A–M3-76 2: The Horizontal Line and Powers: Interpreting Parameters in Context pp. M3-77A–M3-86
		Integrated Math II Textbook	3: Exploring Functions	2: Exponentials	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)	
NC.M1.G-GPE.4	<p>Use coordinates to solve geometric problems involving polygons algebraically</p> <ul style="list-style-type: none"> • Use coordinates to compute perimeters of polygons and areas of triangles and rectangles. • Use coordinates to verify algebraically that a given set of points produces a particular type of triangle or quadrilateral. 	Integrated Math I Textbook	2: Exploring Constant Change	4: Shapes on a Coordinate Plane	1: The Shape of Things: Classifying Shapes on the Coordinate Plane pp. M2-247A–M2-266	
					2: Know It Inside Out: Area and Perimeter of Triangles and Rectangles on the Coordinate Plane pp. M2-267A–M2-286	
		Integrated Math I MATHia Software	2: Exploring Constant Change	7: Distances on the Coordinate Plane	3: In All Shapes and Sizes: Area and Perimeter of Polygons on the Coordinate Plane pp. M2-287A–M2-300	
					1: Deriving the Distance Formula	
2: Calculating Distances using the Distance Formula						
3: Calculating Perimeter and Area Using the Distance Formula						
NC.M1.G-GPE.5	<p>Use coordinates to prove the slope criteria for parallel and perpendicular lines and use them to solve problems.</p> <ul style="list-style-type: none"> • Determine if two lines are parallel, perpendicular, or neither. • Find the equation of a line parallel or perpendicular to a given line that passes through a given point. 	Integrated Math I Textbook	2: Exploring Constant Change	1: Linear Functions	3: Move It!: Transforming Linear Functions pp. M2-41A–M2-60	
					4: Amirite?: Determining Slopes of Perpendicular Lines pp. M2-61A–M2-72	
					5: Making a Connection: Comparing Linear Functions in Different Forms pp. M2-73A–M2-83	
		Integrated Math I MATHia	2: Exploring Constant Change	2: Parallel and Perpendicular Lines	4: Shapes on a Coordinate Plane	1: The Shape of Things: Classifying Shapes on the Coordinate Plane pp. M2-247A–M2-266
						2: Know It Inside Out: Area and Perimeter of Triangles and Rectangles on the Coordinate Plane pp. M2-267A–M2-286
						2: Modeling Parallel and Perpendicular Lines
NC.M1.G-GPE.6	Use coordinates to find the midpoint or endpoint of a line segment.	Integrated Math II Textbook	2: Investigating Proportionality	1: Similarity	6: Jack's Spare Key: Partitioning Segments in Given Ratios pp. M2-95–M2-108	

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)			
NC.M1.S-ID.1	Use technology to represent data with plots on the real number line (histograms, and box plots).	Integrated Math I Textbook	4: Describing Distributions	1: One-Variable Statistics	1: Represent!: Graphically Representing Data pp. M4-7A-M4-16 2: A Skewed Reality: Determining the Better Measure of Center and Spread for a Data Set pp. M4-17A-M4-34			
		Integrated Math I MATHia Software	4: Describing Distributions	1: Numerical Summary Statistics	3: Comparing and Interpreting Measures of Center			
NC.M1.S-ID.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. Interpret differences in shape, center, and spread in the context of the data sets.	Integrated Math I Textbook	4: Describing Distributions	1: One-Variable Statistics	1: Represent!: Graphically Representing Data pp. M4-7A-M4-16 2: A Skewed Reality: Determining the Better Measure of Center and Spread for a Data Set pp. M4-17A-M4-34 3: Daring to Compare: Comparing Data Sets pp. M4-35A-M4-44			
		Integrated Math I MATHia Software	4: Describing Distributions	1: Numerical Summary Statistics	1: Determining Appropriate Measures 3: Comparing and Interpreting Measures of Center 4: Calculating Standard Deviation			
		Integrated Math I Textbook	4: Describing Distributions	1: One-Variable Statistics	2: A Skewed Reality: Determining the Better Measure of Center and Spread for a Data Set pp. M4-17A-M4-34 3: Daring to Compare: Comparing Data Sets pp. M4-35A-M4-44			
		Integrated Math I MATHia	4: Describing Distributions	1: Numerical Summary Statistics	2: Measuring the Effects of Changing Data Sets 3: Comparing and Interpreting Measures of Center			
NC.M1.S-ID.3	Examine the effects of extreme data points (outliers) on shape, center, and/or spread.	Integrated Math I Textbook	4: Describing Distributions	1: One-Variable Statistics	2: A Skewed Reality: Determining the Better Measure of Center and Spread for a Data Set pp. M4-17A-M4-34 3: Daring to Compare: Comparing Data Sets pp. M4-35A-M4-44			
		Integrated Math I MATHia	4: Describing Distributions	1: Numerical Summary Statistics	2: Measuring the Effects of Changing Data Sets 3: Comparing and Interpreting Measures of Center			
NC.M1.S-ID.6a	Fit a least squares regression line to linear data using technology. Use the fitted function to solve problems.	Integrated Math I Textbook	1: Searching for Patterns	3: Linear Regressions	1: Like a Glove: Least Square Regressions pp. M1-163A-M1-176 2: Gotta Keep It Correlatin': Correlation pp. M1-133A-M1-191 3: The Residual Effect: Creating Residual Plots pp. M1-193A-M1-206 4: To Fit or Not To Fit? That Is The Question!: Using Residual Plots pp. M1-207A-M1-218			
					Integrated Math I	1: Searching for Patterns	3: Linear Regression	1: Exploring Linear Regression 2: Using Linear Regression

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.M1.S-ID.6b	Assess the fit of a linear function by analyzing residuals.	Integrated Math I Textbook	1: Searching for Patterns	3: Linear Regressions	3: The Residual Effect: Creating Residual Plots pp. M1-193A-M1-206 4: To Fit or Not To Fit? That Is The Question!: Using Residual Plots pp. M1-207A-M1-218
		Integrated Math I MATHia Software	1: Searching for Patterns	3: Linear Regression	4: Analyzing Residuals of Lines of Best Fit
NC.M1.S-ID.6c	Fit a function to exponential data using technology. Use the fitted function to solve problems.	Integrated Math I Textbook	3: Investigating Growth and Decay	2: Using Exponential Equations	3: Tea and Carbon Dioxide: Modeling Using Exponential Functions pp. M3-87A-M3-96
					4: BAC Is BAD News: Choosing a Function to Model BAC pp. M3-97A-M3-106
NC.M1.S-ID.7	Interpret in context the rate of change and the intercept of a linear model. Use the linear model to interpolate and extrapolate predicted values. Assess the validity of a predicted value.	Integrated Math I Textbook	1: Searching for Patterns	3: Linear Regressions	1: Like a Glove: Least Square Regressions pp. M1-163A-M1-176
		Integrated Math I	1: Searching for Patterns	3: Linear Regression	1: Exploring Linear Regression 3: Interpreting Lines of Best Fit
NC.M1.S-ID.8	Analyze patterns and describe relationships between two variables in context. Using technology, determine the correlation coefficient of bivariate data and interpret it as a measure of the strength and direction of a linear relationship. Use a scatter plot, correlation coefficient, and a residual plot to determine the appropriateness of using a linear function to model a relationship between two variables.	Integrated Math I Textbook	1: Searching for Patterns	3: Linear Regressions	2: Gotta Keep It Correlatin': Correlation pp. M1-133A-M1-191
		Integrated Math I MATHia Software	1: Searching for Patterns	3: Linear Regression	3: Interpreting Lines of Best Fit
NC.M1.S-ID.9	Distinguish between association and causation.	Integrated Math I Textbook	1: Searching for Patterns	3: Linear Regressions	2: Gotta Keep It Correlatin': Correlation pp. M1-133A-M1-191