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Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>M2.N.RN.A.1</b>	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.	Textbook	3: Exploring Functions	2: Exponentials	1: Got Chills...They're Multipliyin': Exponential Functions and Rational Exponents pp. M3-89A–M3-106
		MATHia Software	3: Exploring Functions	4: Rational Exponents	1: Properties of Rational Exponents
<b>M2.N.RN.A.2</b>	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Textbook	1: Reasoning With Shapes	2: Justifying Line and Angle Relationships	4: Identical Twins: Perpendicular Bisector and Isosceles Triangle Theorems pp. M1-143A–M1-164
			3: Exploring Functions	2: Exponentials	1: Got Chills...They're Multipliyin': Exponential Functions and Rational Exponents pp. M3-89A–M3-106
			4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46 5: Ladies and Gents, Please Welcome the Quadratic Formula! The Quadratic Formula pp. M4-81A–M4-102
		MATHia Software	3: Exploring Functions	4: Rational Exponents	2: Rewriting Expressions with Radical and Rational Exponents
<b>M2.N.Q.A.1</b>	Identify, interpret, and justify appropriate quantities for the purpose of descriptive modeling.	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
			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
<b>M2.N.CN.A.1</b>	Know there is a complex number $i$ such that $i^2 = -1$ , and every complex number has the form $a + bi$ with $a$ and $b$ real.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	5: Ladies and Gents, Please Welcome the Quadratic Formula! The Quadratic Formula pp. M4-81A–M4-102
				2: Applications of Quadratics	1: $i$ Want to Believe: Imaginary and Complex Numbers pp. M4-115–M4-136
		MATHia Software	4: Seeing Structure	5: Operations with Complex Numbers	1: Introduction to Complex Numbers 2: Simplifying Radicals with Negative Radicands 3: Simplifying Powers of $i$

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>M2.N.CN.A.2</b>	Know and use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	Textbook	4: Seeing Structure	2: Applications of Quadratics	1: i Want to Believe: Imaginary and Complex Numbers pp. M4-115–M4-136
		MATHia Software	4: Seeing Structure	5: Operations with Complex Numbers	4: Adding and Subtracting Complex Numbers 5: Multiplying Complex Numbers
<b>M2.N.CN.B.3</b>	Solve quadratic equations with real coefficients that have complex solutions.	Textbook	4: Seeing Structure	2: Applications of Quadratics	1: i Want to Believe: Imaginary and Complex Numbers pp. M4-115–M4-136
		MATHia Software	4: Seeing Structure	5: Operations with Complex Numbers	6: Solving Quadratic Equations with Complex Roots
<b>M2.A.SSE.A.1a</b>	Interpret complicated expressions by viewing one or more of their parts as a single entity.	Textbook	3: Exploring Functions	2: Exponentials	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
			4: Seeing Structure	1: Solving Quadratic Equations	5: Ladies and Gents, Please Welcome the Quadratic Formula!: The Quadratic Formula pp. M4-81A–M4-102
<b>M2.A.SSE.A.2</b>	Use the structure of an expression to identify ways to rewrite it.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46
		MATHia Software	4: Seeing Structure	2: Quadratic Expression Factoring	3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form pp. M4-47A–M4-58 5: Factoring Using Difference of Squares
<b>M2.A.SSE.B.3a</b>	Factor a quadratic expression to reveal the zeros of the function it defines.	Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190 3: More Than Meets the Eye: Transformations of Quadratic Functions pp. M3-191A–M3-216
			4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46

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<b>M2.A.SSE.B.3a</b>	Factor a quadratic expression to reveal the zeros of the function it defines.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	3: Transforming Solutions: Solutions to Quadratic Equations in Vertex Form pp. M4-47A–M4-58
		MATHia Software	4: Seeing Structure	2: Quadratic Expression Factoring	3: Factoring Trinomials with Coefficients of One
					4: Factoring Trinomials with Coefficients Other Than One
				3: Forms of Quadratics	6: Factoring Quadratic Expressions
					3: Converting Quadratics to General Form
					4: Converting Quadratics to Factored Form
5: Converting Quadratics to Vertex Form					
<b>M2.A.SSE.B.3b</b>	Complete the square in a quadratic expression in the form $Ax^2 + Bx + C$ to reveal the maximum or minimum value of the function it defines.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80
		MATHia Software	4: Seeing Structure	3: Forms of Quadratics	3: Converting Quadratics to General Form
					4: Converting Quadratics to Factored Form
5: Converting Quadratics to Vertex Form					
<b>M2.A.APR.A.1</b>	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	1: This Time, With Polynomials: Adding, Subtracting, and Multiplying Polynomials pp. M4-7A–M4-32
		MATHia Software	4: Seeing Structure	1: Polynomial Operations	1: Introduction to Polynomial Arithmetic
					2: Adding Polynomials
					3: Subtracting Polynomials
					4: Using a Factor Table to Multiply Polynomials
					5: Multiplying Polynomials
2: Quadratic Expression Factoring	1: Using a Factor Table to Multiply Binomials				
	2: Multiplying Binomials				
<b>M2.A.CED.A.1</b>	Create equations and inequalities in one variable and use them to solve problems.	Textbook	3: Exploring Functions	2: Exponentials	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
			4: Seeing Structure	2: Applications of Quadratic Equations	2: Ahead of the Curve: Solving Quadratic Inequalities pp. M4-137A–M4-146
		MATHia Software	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					

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<b>M2.A.CED.A.2</b>	Create equations in two or more variables to represent relationships between quantities; graph equations with two variables on coordinate axes with labels and scales.	Textbook	3: Exploring Functions	1: Functions Derived from Linear Relationships	2: Play Ball!: Absolute Value Equations and Inequalities pp. M3-25A–M3-38
			4: Seeing Structure	2: Applications of Quadratic Equations	2: Ahead of the Curve: Solving Quadratic Inequalities pp. M4-137A–M4-146 3: All Systems Are Go!: Systems of Quadratic Equations pp. M4-147A–M4-158
<b>M2.A.CED.A.3</b>	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.	Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	4: You Lose Some, You Lose Some: Comparing Functions Using Key Characteristics and Average Rate of Change pp. M3-217A–M3-232
<b>M2.A.REI.A.1</b>	Explain each step in solving an 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 a solution method.	Textbook	2: Exploring Constant Change	2: Solving Linear Equations and Inequalities	1: Strike a Balance: Solving Linear Equations pp. M2-97A–M2-108A
<b>M2.A.REI.B.2</b>	Solve quadratic equations and inequalities in one variable.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	5: Ladies and Gents, Please Welcome the Quadratic Formula!: The Quadratic Formula pp. M4-81A–M4-102
				2: Applications of Quadratic Equations	2: Ahead of the Curve: Solving Quadratic Inequalities pp. M4-137A–M4-146
<b>M2.A.REI.B.2a</b>	Use the method of completing the square to rewrite any quadratic equation in $x$ into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80 5: Ladies and Gents, Please Welcome the Quadratic Formula!: The Quadratic Formula pp. M4-81A–M4-102
				2: Applications of Quadratic Equations	2: Ahead of the Curve: Solving Quadratic Inequalities pp. M4-137A–M4-146
		MATHia Software	4: Seeing Structure	3: Forms of Quadratics	1: Completing the Square

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<b>M2.A.REI.B.2b</b>	Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, knowing and applying 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 $a \pm bi$ for real numbers $a$ and $b$ .	Textbook	4: Seeing Structure	1: Solving Quadratic Equations	2: Solutions, More or Less: Representing Solutions to Quadratic Equations pp. M4-33A–M4-46 5: Ladies and Gents, Please Welcome the Quadratic Formula! The Quadratic Formula pp. M4-81A–M4-102
				2: Applications of Quadratics	1: i Want to Believe: Imaginary and Complex Numbers pp. M4-115–M4-136
				2: Applications of Quadratic Equations	2: Ahead of the Curve: Solving Quadratic Inequalities pp. M4-137A–M4-146
		MATHia Software	4: Seeing Structure	4: Quadratic Equation Solving	2: Solving Quadratic Equations by Factoring 3: Solving Quadratic Equations
<b>M2.A.REI.C.3</b>	Write and solve a system of linear equations in context.	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 5: Working the System: Solving Systems of Equations and Inequalities pp. M2-217A–M2-226
<b>M2.A.REI.C.4</b>	Solve a system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.	Textbook	4: Seeing Structure	2: Applications of Quadratic Equations	3: All Systems Are Go!: Systems of Quadratic Equations pp. M4-147A–M4-158
				3: Circles on a Coordinate Plane	2: A Blip on the Radar: Determining Points on a Circle pp. M4-201A–M4-216

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<b>M2.F.IF.A.1</b>	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.*	Textbook	3: Exploring Functions	1: Functions Derived from Linear Relationships	3: I Graph in Pieces: Linear Piecewise Functions pp. M3-39A–M3-52
				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
		MATHia Software	3: Exploring Functions	6: Quadratic Models in Factored Form	3: Interpreting Maximums of Quadratic Models
				7: Quadratic Models in General Form	1: Modeling Projectile Motion 2: Recognizing Key Features of Vertical Motion Graphs
<b>M2.F.IF.A.2</b>	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.*	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
<b>M2.F.IF.A.3</b>	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.*	Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	2: Endless Forms Most Beautiful: Key Characteristics of Quadratic Functions pp. M3-167A–M3-190
<b>M2.F.IF.B.4a</b>	Graph linear and quadratic functions and show intercepts, maxima, and minima.	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
		MATHia Software	4: Seeing Structure	3: Forms of Quadratics	6: Sketching Quadratic Functions

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<b>M2.F.IF.B.4b</b>	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Textbook	3: Exploring Functions	1: Functions Derived from Linear Relationships	1: Putting the V in Absolute Value: Building Volume and Surface Area Formulas for Pyramids, Cones, and Spheres pp. M3-7A–M3-24
					2: Play Ball!: Absolute Value Equations and Inequalities pp. M3-25A–M3-38
					3: I Graph in Pieces: Linear Piecewise Functions pp. M3-39A–M3-52
			4: Step by Step: Step Functions pp. M3-53–M3-64		
		4: Seeing Structure	2: Applications of Quadratic Equations	4: Model Behavior: Using Quadratic Functions to Model Data pp. M4-159A–M4-174	
		MATHia Software	3: Exploring Functions	2: 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					
<b>M2.F.IF.B.4c</b>	Graph exponential and logarithmic functions, showing intercepts and end behavior.	Textbook	3: Inverting Functions	2: Exponential and Logarithmic Functions	2: Pert and Nert: Properties of Exponential Graphs pp. M3-107A–M3-124
					3: Return of the Inverse: Logarithmic Functions pp. M3-125A–M3-136
			4: Applications of Growth Modeling	2: Paint by Numbers: Art and Transformations pp. M3-267A–M3-276	
			4: Investigating Periodic Functions	1: Trigonometric Relationships	2: A Sense of Deja Vu: Periodic Functions pp. M4-21A–M4-36
		3: What Goes Around: The Sine and Cosine Functions pp. M4-49A–M4-64			
		6: Farmer's Tan: The Tangent Function pp. M4-79A–M4-96			



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<b>M2.F.IF.B.5a</b>	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.	Textbook	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	4: The Missing Link: Factoring and Completing the Square pp. M4-59A–M4-80
		MATHia Software	4: Seeing Structure	3: Forms of Quadratics	1: Completing the Square
					2: Identifying the Properties of Quadratic Functions
					3: Converting Quadratics to General Form
4: Converting Quadratics to Factored Form					
5: Converting Quadratics to Vertex Form					
<b>M2.F.IF.B.5b</b>	Know and use the properties of exponents to interpret expressions for exponential functions.	Textbook	3: Exploring Functions	2: Exponentials	2: Turn That Frown Upside Down: Growth and Decay Functions pp. M3-107A–M3-118
<b>M2.F.IF.B.6</b>	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).	Textbook	3: Exploring Functions	3: Introduction to Quadratic Functions	4: You Lose Some, You Lose Some: Comparing Functions Using Key Characteristics and Average Rate of Change pp. M3-217A–M3-232
		MATHia Software	4: Seeing Structure	3: Forms of Quadratics	7: Comparing Quadratic Functions in Different Forms
<b>M2.F.BF.A.1a</b>	Determine an explicit expression, a recursive process, or steps for calculation from a context.	Textbook	3: Exploring Functions	2: Exponentials	1: Got Chills...They're Multipliyin': Exponential Functions and Rational Exponents pp. M3-89A–M3-106
<b>M2.F.BF.A.1b</b>	Combine standard function types using arithmetic operations.	Textbook	3: Exploring Functions	2: Exponentials	4: Saving Strategies: Modeling with and Combining Function Types pp. M3-133–M3-142
		MATHia Software	4: Seeing Structure	6: Function Operations	3: Adding and Subtracting Linear Functions
<b>M2.F.BF.B.2</b>	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. Experiment with cases and illustrate an explanation of the effects on the graph using technology.	Textbook	3: Exploring Functions	1: Functions Derived from Linear Relationships	1: Putting the V in Absolute Value: Building Volume and Surface Area Formulas for Pyramids, Cones, and Spheres pp. M3-7A–M3-24

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<b>M2.F.BF.B.2</b>	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. Experiment with cases and illustrate an explanation of the effects on the graph using technology.	Textbook	3: Exploring Functions	2: Exponentials	3: Just So . . . Basic: Horizontal Dilations of Exponential Functions pp. M3-119A–M3-132		
				3: Introduction to Quadratic Functions	3: More Than Meets the Eye: Transformations of Quadratic Functions pp. M3-191A–M3-216		
		MATHia Software	3: Exploring Functions	5: 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	
					8: 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		2: Operating with Functions on the Coordinate Plane	
				4: Seeing Structure	6: Function Operations		
				<b>M2.G.SRT.A.1</b>	Verify informally the properties of dilations given by a center and a scale factor.	Textbook	2: Investigating Proportionality
1: Big, Little, Big, Little: Dilating Figures to Create Similar Figures pp. M2-7A–M2-21							
<b>M2.G.SRT.A.2</b>	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.	Textbook	2: Investigating Proportionality	1: Similarity	1: Big, Little, Big, Little: Dilating Figures to Create Similar Figures pp. M2-7A–M2-21		
		MATHia Software	2: Investigating Proportionality	1: Similar Triangles	2: Similar Triangles or Not?: Establishing Triangle Similarity Criteria pp. M2-23A–M2-35		
					1: Understanding Similarity		

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<b>M2.G.SRT.A.3</b>	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	Textbook	2: Investigating Proportionality	1: Similarity	2: Similar Triangles or Not?: Establishing Triangle Similarity Criteria pp. M2-23A–M2-35
					4: This Isn't Your Average Mean: More Similar Triangles pp. M2-65A–M2-78
<b>M2.G.SRT.B.4</b>	Prove theorems about similar triangles.	Textbook	2: Investigating Proportionality	1: Similarity	3: Keep It in Proportion: Theorems About Proportionality pp. M2-37A–M2-64
		MATHia Software	2: Investigating Proportionality	1: Similar Triangles	4: This Isn't Your Average Mean: More Similar Triangles pp. M2-65A–M2-78
<b>M2.G.SRT.B.5</b>	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	Textbook	1: Reasoning With Shapes	3: Using Congruence Theorems	1: SSS, SAS, AAS, . . . S.O.S!: Using Triangle Congruence to Determine Relationships Between Segments pp. M1-209A–M2-220
			2: Investigating Proportionality	1: Similarity	4: This Isn't Your Average Mean: More Similar Triangles pp. M2-65A–M2-78
		MATHia Software	2: Investigating Proportionality	1: Similar Triangles	5: Run It Up the Flagpole: Application of Similar Triangles pp. M2-79A–M2-93
<b>M2.G.SRT.C.6</b>	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	Textbook	2: Investigating Proportionality	2: Trigonometry	2: Calculating Corresponding Parts of Similar Triangles
					1: Three Angle Measure: Introduction to Trigonometry pp. M2-121A–M2-135

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<b>M2.G.SRT.C.6</b>	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	Textbook	2: Investigating Proportionality	2: Trigonometry	2: The Tangent Ratio: Tangent Ratio, Cotangent Ratio, and Inverse Tangent pp. M2-137A–M2-153
					3: The Sine Ratio: Sine Ratio, Cosecant Ratio, and Inverse Sine pp. M2-155A–M2-169
					4: The Cosine Ratio: Cosine Ratio, Secant Ratio, and Inverse Cosine pp. M2-171A–M2-185
		MATHia Software	2: Investigating Proportionality	2: Trigonometric Ratios	1: Introduction to Trigonometric Ratios
<b>M2.G.SRT.C.7</b>	Explain and use the relationship between the sine and cosine of complementary angles.	Textbook	2: Investigating Proportionality	2: Trigonometry	5: We Complement Each Other: Complement Angle Relationships pp. M2-187A–M2-198
		MATHia Software	2: Investigating Proportionality	2: Trigonometric Ratios	2: Relating Sines and Cosines of Complementary Angles
<b>M2.G.SRT.C.8a</b>	Know and use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.	Textbook	2: Investigating Proportionality	2: Trigonometry	2: The Tangent Ratio: Tangent Ratio, Cotangent Ratio, and Inverse Tangent pp. M2-137A–M2-153
					3: The Sine Ratio: Sine Ratio, Cosecant Ratio, and Inverse Sine pp. M2-155A–M2-169
					4: The Cosine Ratio: Cosine Ratio, Secant Ratio, and Inverse Cosine pp. M2-171A–M2-185
					5: We Complement Each Other: Complement Angle Relationships pp. M2-187A–M2-198
		MATHia Software	2: Investigating Proportionality	3: Right Triangles and Trigonometric Ratios	1: Using One Trigonometric Ratio to Solve Problems
			2: Using Multiple Trigonometric Ratios to Solve Problems		
<b>M2.G.SRT.C.8b</b>	Know and use the Law of Sines and the Law of Cosines to solve triangles in applied problems. Recognize when it is appropriate to use each.	Textbook	4: Investigating Periodic Functions	1: Trigonometric Relationships	1: The Deriving Force: Deriving the Triangle Area Formula, Law of Sines, and Law of Cosines pp. M4-7A–M4-20
<b>M2.G.GMD.A.1</b>	Give an informal argument for the formulas for the circumference of a circle and the volume and surface area of a cylinder, cone, prism, and pyramid.	Textbook	2: Investigating Proportionality	3: Circles and Volume	1: All Circles Great and Small: Similarity Relationships in Circles pp. M2-211A–M2-228

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>M2.G.GMD.A.1</b>	Give an informal argument for the formulas for the circumference of a circle and the volume and surface area of a cylinder, cone, prism, and pyramid.	Textbook	2: Investigating Proportionality	3: Circles and Volume	2: A Slice of Pi: Sectors and Segments of a Circle pp. M2-229A–M2-248
					3: Cakes and Pancakes: Building Three-Dimensional Figures pp. M2-249A–M2-266
					4: Get to the Point: Building Volume and Surface Area Formulas for Pyramids, Cones, and Spheres pp. M2-267A–M2-290
<b>M2.G.GMD.A.2</b>	Know and use volume and surface area formulas for cylinders, cones, prisms, pyramids, and spheres to solve problems.*	Textbook	2: Investigating Proportionality	3: Circles and Volume	4: Get to the Point: Building Volume and Surface Area Formulas for Pyramids, Cones, and Spheres pp. M2-267A–M2-290
					MATHia Software
		2: Calculating Volume of Pyramids			
		3: Calculating Volume of Cones			
4: Calculating Volume of Spheres					
<b>M2.S.ID.A.1a</b>	Fit a function to the data; use functions fitted to data to solve problems in the context of the data.	Textbook	4: Seeing Structure	2: Applications of Quadratic Equations	4: Model Behavior: Using Quadratic Functions to Model Data pp. M4-159A–M4-174
		MATHia Software	4: Seeing Structure	6: Function Operations	1: Using Regression Models
<b>M2.S.CP.A.1</b>	Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).	Textbook	5: Making Informed Decisions	1: Independence and Conditional Probability	1: What Are the Chances?: Compound Sample Spaces pp. M5-7A–M5-26
<b>M2.S.CP.A.2</b>	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	Textbook	5: Making Informed Decisions	1: Independence and Conditional Probability	2: And?: Compound Probability with And pp. M5-27A–M5-40
		MATHia Software	5: Making Informed Decisions	1: Independence and Conditional Probability	4: And, Or, and More!: Calculating Compound Probability pp. M5-57A–M5-70
					1: Independent Events

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>M2.S.CP.A.3</b>	Know and understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$ , and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	Textbook	5: Making Informed Decisions	2: Computing Probabilities	2: It All Depends: Conditional Probability pp. M5-99A–M5-112
		MATHia Software	5: Making Informed Decisions	1: Independence and Conditional Probability	2: Conditional Probability
<b>M2.S.CP.A.4</b>	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.	Textbook	5: Making Informed Decisions	2: Computing Probabilities	2: It All Depends: Conditional Probability pp. M5-99A–M5-112
		MATHia Software	5: Making Informed Decisions	1: Independence and Conditional Probability	4: Recognizing Concepts of Conditional Probability
<b>M2.S.CP.B.5</b>	Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A and interpret the answer in terms of the model.	Textbook	5: Making Informed Decisions	2: Computing Probabilities	2: It All Depends: Conditional Probability pp. M5-99A–M5-112
		MATHia Software	5: Making Informed Decisions	1: Independence and Conditional Probability	2: Conditional Probability
<b>M2.S.CP.B.6</b>	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ , and interpret the answer in terms of the model.	Textbook	5: Making Informed Decisions	1: Independence and Conditional Probability	3: Or?: Compound Probability with Or pp. M5-41A–M5-55 4: And, Or, and More!: Calculating Compound Probability pp. M5-57A–M5-70
		MATHia Software	5: Making Informed Decisions	1: Independence and Conditional Probability	5: Calculating Compound Probabilities