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Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.RP.1	Compute unit rates, including those involving complex fractions, with like or different units.	Textbook	1: Thinking Proportionally	2: Fractional Rates	1: Making Punch: Unit Rate Representations pp. M1-51–M1-58 2: Eggzactly!: Solving Problems with Ratios of Fractions pp. M1-59–M1-68
		MATHia Software	1: Thinking Proportionally	2: Ratio and Rate Reasoning	1: Fractional Rates 2: Determining and Comparing Rates
7.RP.2	Identify and model proportional relationships given multiple representations, including tables, graphs, equations, diagrams, verbal descriptions, and real-world situations.	Textbook	1: Thinking Proportionally	3: Proportionality	4: Minding Your Ps and Qs: Constant of Proportionality in Multiple Representations pp. M1-139–M1-152
7.RP.2a	Determine when two quantities are in a proportional relationship.	Textbook	1: Thinking Proportionally	2: Fractional Rates	2: Eggzactly!: Solving Problems with Ratios of Fractions pp. M1-59–M1-68
				3: Proportionality	1: How Does Your Garden Grow?: Proportional Relationships pp. M1-91–M1-108
		MATHia Software	1: Thinking Proportionally	3: Proportional Reasoning	1: Proportional Relationships 2: Determining Characteristics of Graphs of Proportional Relationships
				4: Representing Proportional Relationships by Equations	5: Exploring Proportions
7.RP.2b	Recognize or compute the constant of proportionality.	Textbook	1: Thinking Proportionally	3: Proportionality	2: Complying with Title IX: Constant of Proportionality pp. M1-109–M1-126
					3: Fish-Inches: Identifying the Constant of Proportionality in Graphs pp. M1-127–M1-138
		MATHia Software	1: Thinking Proportionally	4: Representing Proportional Relationships by Equations	5: Exploring Proportions
					2: Writing Proportional Relationships with Equations 3: Converting Between Forms of Proportional Relationships 4: Modeling the Constant of Proportionality

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.RP.2c	Understand that the constant of proportionality is the unit rate.	Textbook	1: Thinking Proportionally	3: Proportionality	2: Complying with Title IX: Constant of Proportionality pp. M1-109–M1-126
					3: Fish-Inches: Identifying the Constant of Proportionality in Graphs pp. M1-127–M1-138
		MATHia Software	1: Thinking Proportionally	4: Representing Proportional Relationships by Equations	2: Writing Proportional Relationships with Equations
					3: Converting Between Forms of Proportional Relationships
7.RP.2d	Use equations to model proportional relationships.	Textbook	1: Thinking Proportionally	2: Proportionality	3: Tagging Sharks: Solving Proportions Using Means and Extremes pp. M1-69–M1-82
				3: Proportionality	2: Complying with Title IX: Constant of Proportionality pp. M1-109–M1-126
		MATHia Software	1: Thinking Proportionally	3: Proportional Reasoning	3: Solving Proportions using Equivalent Ratios
					4: Rewriting Proportions as Products
				4: Representing Proportional Relationships by Equations	5: Solving Proportions Using Means and Extremes
					2: Writing Proportional Relationships with Equations
		3: Converting Between Forms of Proportional Relationships			
		7.RP.2e	Investigate the graph of a proportional relationship and explain the meaning of specific points (e.g., origin, unit rate) in the context of the situation.	Textbook	1: Thinking Proportionally
MATHia Software	1: Thinking Proportionally			4: Representing Proportional Relationships by Equations	4: Modeling the Constant of Proportionality

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.RP.3	Solve real-world and mathematical problems involving ratios and percentages using proportional reasoning (e.g., multi-step dimensional analysis, percent increase/decrease, tax).	Textbook	1: Thinking Proportionally	2: Fractional Rates	3: Tagging Sharks: Solving Proportions Using Means and Extremes pp. M1-69–M1-82
				4: Proportional Relationships	1: Markups and Markdowns: Introducing Proportions to Solve Percent Problems pp. M1-161–M1-176
					2: Perks of Work: Calculating Tips, Commission, and Simple Interest pp. M1-177–M1-196
					3: No Taxation Without Calculation: Sales Tax, Income Tax, and Fees pp. M1-197–M1-208
			4: More Ups and Downs: Percent Increase and Percent Decrease pp. M1-209–M1-222		
			2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	3: Building a Wright Brothers' Flyer: Simplifying Expressions to Solve Problems pp. M2-113–M2-124
		4: Analyzing Populations and Probabilities	1: Introduction to Probability	3: Toss the Cup: Determining Experimental Probability of Simple Events pp. M4-33–M4-46	
		MATHia Software	1: Thinking Proportionally	5: Percent Conversions	1: Fractional Percent Models
					2: Converting with Fractional Percents
				6: Proportional Reasoning and Percents	1: Using Proportions to Solve Percent Problems
2: Solving Simple Percent Problems					
7: Problem Solving with Percents Using Proportional Relationships	1: Calculating Percent Change and Final Amounts				
	2: Using Percents and Percent Change				
8: Calculating Sales Tax and Discounts	1: Calculating Sales Tax or Discounts				
	2: Solving Problems with Both Sales Tax and Discounts				
7.NS.1	Extend prior knowledge of operations with positive rational numbers to add and to subtract all rational numbers and represent the sum or difference on a number line.	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	1: Math Football: Using Models to Understand Integer Addition pp. M2-7–M2-16
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	2: Adding and Subtracting Negative Integers
7.NS.1a	Understand that the additive inverse of a number is its opposite and their sum is equal to zero..	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	3: Two-Color Counters: Adding Integers, Part II pp. M2-31–M2-48
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	1: Understanding Opposites
					2: Adding and Subtracting Negative Integers

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.NS.1b	Understand that the sum of two rational numbers $(p + q)$ represents a distance from p on the number line equal to $ q $ where the direction is indicated by the sign of q .	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	2: Walk the Line: Adding Integers, Part II pp. M2-17–M2-30 3: Two-Color Counters: Adding Integers, Part II pp. M2-31–M2-48
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	2: Adding and Subtracting Negative Integers 3: Using Number Lines to Add and Subtract Integers
7.NS.1c	Translate between the subtraction of rational numbers and addition using the additive inverse, $p - q = p + (-q)$.	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	4: What's the Difference?: Subtracting Integers pp. M2-49–M2-68
7.NS.1d	Demonstrate that the distance between two rational numbers on the number line is the absolute value of their difference.	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	4: What's the Difference?: Subtracting Integers pp. M2-49–M2-68
7.NS.1e	Apply mathematical properties (e.g., commutative, associative, distributive, or the properties of identity and inverse elements) to add and subtract rational numbers.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	4: Properties Schmoerties: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	4: Developing Algorithms for Adding and Subtracting Integers
7.NS.2a	Understand that the multiplicative inverse of a number is its reciprocal and their product is equal to one.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	3: Going Formal: Using Inverse Operations to Solve Equations pp. M3-77–M3-94
7.NS.2b	Understand sign rules for multiplying rational numbers.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	1: Equal Groups: Multiplying and Dividing Integers pp. M2-89–M2-102
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	5: Multiplying and Dividing Integers
7.NS.2c	Understand sign rules for dividing rational numbers and that a quotient of integers (with a non-zero divisor) is a rational number.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	2: Let's Be Rational!: Quotients of Integers pp. M2-103–M2-112
7.NS.2d	Apply mathematical properties (e.g., commutative, associative, distributive, or the properties of identity and inverse elements) to multiply and divide rational numbers.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	4: Properties Schmoerties: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.NS.2e	Understand that some rational numbers can be written as integers and all rational numbers can be written as fractions or decimal numbers that terminate or repeat.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	2: Let's Be Rational!: Quotients of Integers pp. M2-103–M2-112
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	6: Converting Rational Numbers to Decimals
7.NS.3	Apply the concepts of all four operations with rational numbers to solve real-world and mathematical problems.	Textbook	2: Operating with Signed Numbers	1: Adding and Subtracting Rational Numbers	5: All Mixed Up: Adding and Subtracting Rational Numbers pp. M2-69–M2-80
				2: Multiplying and Dividing Rational Numbers	1: Equal Groups: Multiplying and Dividing Integers pp. M2-89–M2-102
					3: Building a Wright Brothers' Flyer: Simplifying Expressions to Solve Problems pp. M2-113–M2-124
		MATHia Software	2: Operating with Signed Numbers	2: Evaluating Numeric Expressions	4: Properties Schmoerties: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134
					1: Evaluating Simple Numeric Expressions with Integers
					2: Evaluating Numeric Expressions Involving Integers with Parentheses and Exponents
3: Evaluating Simple Numeric Expressions with Rational Numbers					
4: Evaluating Complex Numeric Expressions with Rational Numbers					
7.NS.4	Understand and apply the concepts of comparing and ordering to rational numbers.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	4: Be Greater Than: Solving Inequalities with Inverse Operations pp. M3-97–M3-118
7.NS.4a	Interpret statements using less than ($<$), greater than ($>$), less than or equal to (\leq), greater than or equal to (\geq), and equal to ($=$) as relative locations on the number line.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	4: Be Greater Than: Solving Inequalities with Inverse Operations pp. M3-97–M3-118
7.NS.4b	Use concepts of equality and inequality to write and explain real-world and mathematical situations.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	4: Be Greater Than: Solving Inequalities with Inverse Operations pp. M3-97–M3-118
7.NS.5	Extend prior knowledge to translate among multiple representations of rational numbers (fractions, decimal numbers, percentages). Exclude the conversion of repeating decimal numbers to fractions.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	2: Let's Be Rational!: Quotients of Integers pp. M2-103–M2-112

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.EE1.1	Apply mathematical properties (e.g., commutative, associative, distributive) to simplify and to factor linear algebraic expressions with rational coefficients.	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	2: Mathematic Gymnastics: Rewriting Expressions Using the Distributive Property pp. M3-19–M3-32
					3: All My Xs: Combining Like Terms pp. M3-33–M3-43
		MATHia Software	3: Reasoning Algebraically	1: Variable Expressions	1: Factoring Linear Expressions
					2: Rewriting Simple Algebraic Expressions Involving Integer Coefficients
					3: Rewriting Algebraic Expressions Involving Integer Coefficients with Four Operations
					4: Rewriting Algebraic Expressions Involving Integer Coefficients with Parentheses and Exponents
5: Rewriting Complex Algebraic Expressions Involving Integer Coefficients					
6: Rewriting Algebraic Expressions Involving Integer Coefficients					
7.EE1.2	Recognize that algebraic expressions may have a variety of equivalent forms and determine an appropriate form for a given real-world situation.	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	3: All My Xs: Combining Like Terms pp. M3-33–M3-43
				3: Multiple Representations of Equations	2: Stretches, Stacks, and Structure: Structure of Linear Equations pp. M3-141–M3-156
		MATHia Software	1: Thinking Proportionally	8: Calculating Sales Tax and Discounts	3: Analyzing Different Forms of Equations
7.EE1.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	1: No Substitute for Hard Work: Evaluating Algebraic Expressions pp. M3-7–M3-18
					2: Mathematic Gymnastics: Rewriting Expressions Using the Distributive Property pp. M3-19–M3-32
					2: Mathematic Gymnastics: Rewriting Expressions Using the Distributive Property pp. M3-19–M3-32
		MATHia Software	3: Reasoning Algebraically	5: Problem Solving with Two-Step Equations and Inequalities	2: Using Linear Equations and Inequalities
					3: Solving Problems with Integers
4: Solving Problems with Decimals and Fractions					

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)	
7.EE1.4	Apply the concepts of linear equations and inequalities in one variable to real-world and mathematical situations.	Textbook	3: Reasoning Algebraically	3: Multiple Representations of Equations	4: Texas Tea and Temperature: Using Multiple Representations to Solve Problems pp. M3-171–M3-182	
		MATHia Software	3: Reasoning Algebraically	2: Modeling Two-Step Expressions and Equations	2: Identifying Attributes of Linear Relationships	
				5: Problem Solving with Two-Step Equations and Inequalities	3: Analyzing Models of Two-Step Linear Relationships	
7.EE1.4a	Write and fluently solve linear equations of the form $ax + b = c$ and $a(x + b) = c$ where a , b , and c are rational numbers.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	1: Picture Algebra: Modeling Equations by Equal Expressions pp. M3-53–M3-64	
					2: Expressions That Play Together....: Solving Equations on a Double Number Line pp. M3-65–M3-76	
					3: Going Formal: Using Inverse Operations to Solve Equations pp. M3-77–M3-96	
		MATHia Software	3: Reasoning Algebraically	3: Multiple Representations of Equations	1: Put It on the Plane: Representing Equations with Tables and Graphs pp. M3-127–M3-140	
					2: Stretches, Stacks, and Structure: Structure of Linear Equations pp. M3-141–M3-156	
		MATHia Software	3: Reasoning Algebraically	3: Solving Two-Step Equations	2: Modeling Two-Step Expressions and Equations	1: Using Picture Algebra with Equations
					5: Problem Solving with Two-Step Equations and Inequalities	4: Modeling Two-Step Expressions
						1: Checking Solutions to Linear Equations
						2: Solving with Multiplication (No Type In)
						3: Solving with Multiplication (Type In)
4: Solving with Division (No Type In)						
5: Solving with Division (Type In)						
6: Solving Two-Step Equations						
1: Determining the Value of an Independent Variable						
3: Solving Problems with Integers						

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.EE.4a	Write and fluently solve linear equations of the form $ax + b = c$ and $a(x + b) = c$ where a , b , and c are rational numbers.	MATHia Software	3: Reasoning Algebraically	5: Problem Solving with Two-Step Equations and Inequalities	4: Solving Problems with Decimals and Fractions
				6: The Coordinate Plane and Two-Step Equations	1: Graphs of Equations 2: Using the Graphs to Solve Equations
7.EE.4b	Write and solve multi-step linear equations that include the use of the distributive property and combining like terms. Exclude equations that contain variables on both sides.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	3: Going Formal: Using Inverse Operations to Solve Equations pp. M3-77–M3-96
		MATHia Software	3: Reasoning Algebraically	2: Modeling Two-Step Expressions and Equations	1: Using Picture Algebra with Equations
7.EE.4c	Write and solve two-step linear inequalities. Graph the solution set on a number line and interpret its meaning.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	4: Be Greater Than: Solving Inequalities with Inverse Operations pp. M3-97–M3-118
				3: Multiple Representations of Equations	3: Deep Flight I: Building Inequalities and Equations to Solve Problems pp. M3-157–M3-170
		MATHia Software	3: Reasoning Algebraically	4: Solving Two-Step Inequalities	1: Graphing Inequalities with Rational Numbers 2: Solving One-Step Linear Inequalities 3: Solving Two-Step Linear Inequalities
7.EE.4d	Identify and justify the steps for solving multi-step linear equations and two-step linear inequalities.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	3: Going Formal: Using Inverse Operations to Solve Equations pp. M3-77–M3-96
7.EE.5	Understand and apply the laws of exponents (i.e., product rule, quotient rule, power to a power, product to a power, quotient to a power, zero power property) to simplify numerical expressions that include whole-number exponents.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	5: A Generational Thing: Properties of Powers with Rational Exponents pp. M2-135–M2-150 6: Show How You Know: Analyzing Properties of Powers pp. M2-151–M2-163
		MATHia Software	2: Operating with Signed Numbers	3: Properties of Whole Number Exponents	1: Introduction to the Power Rules 2: Using the Product Rule and the Quotient Rule 3: Using the Power to a Power Rule 4: Using the Product to a Power Rule and the Quotient to a Power Rule 5: Using Properties of Exponents with Whole Number Powers

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.GM.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Textbook	1: Thinking Proportionally	4: Proportional Relationships	5: Pound for Pound, Inch for Inch: Scale and Scale Drawings pp. M1-223-M1-240
		MATHia Software	1: Thinking Proportionally	9: Scale Drawings	1: Critical Attributes of Similar Figures
					2: Using Scale Drawings
3: Using Scale Factor					
7.GM.2	Construct triangles and special quadrilaterals using a variety of tools (e.g., freehand, ruler and protractor, technology).	Textbook	5: Constructing and Measuring	1: Angles, Triangles, and Quadrilaterals	1: Here's Lookin' at Euclid: Geometric Constructions pp. M5-7-M5-18
7.GM.2a	Construct triangles given all measurements of either angles or sides.	Textbook	5: Constructing and Measuring	1: Angles, Triangles, and Quadrilaterals	3: Consider Every Side: Constructing Triangles Given Sides pp. M5-39-M5-52
7.GM.2b	Decide if the measurements determine a unique triangle, more than one triangle, or no triangle.	Textbook	5: Constructing and Measuring	1: Angles, Triangles, and Quadrilaterals	4: Unique or Not?: Constructing Triangles Given Angles pp. M5-53-M5-66
7.GM.2c	Construct special quadrilaterals (i.e., kite, trapezoid, isosceles trapezoid, rhombus, parallelogram, rectangle) given specific parameters about angles or sides.	Textbook	5: Constructing and Measuring	1: Angles, Triangles, and Quadrilaterals	5: Quad Goals: Constructing Special Quadrilaterals pp. M5-67-M5-82
7.GM.3	Describe two-dimensional cross-sections of three-dimensional figures, specifically right rectangular prisms and right rectangular pyramids.	Textbook	5: Constructing and Measuring	2: Three-Dimensional Figures	1: Slicing and Dicing: Cross-Sections of Rectangular Prisms pp. M5-93-M5-114
		MATHia Software	5: Constructing and Measuring	2: Three-Dimensional Figures	2: Dissecting a Pyramid: Cross-Sections of Rectangular Pyramids pp. M5-115-M5-124
7.GM.4a	Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle.	Textbook	1: Thinking Proportionally	1: Circles and Ratio	1: Pi: The Ultimate Ratio: Exploring the Ratio of Circle Circumference to Diameter pp. M1-7-M1-18
		MATHia Software	1: Thinking Proportionally	1: Circles	1: Investigating Circles
7.GM.4b	Understand that the constant of proportionality between the circumference and diameter is equivalent to Pi.	Textbook	1: Thinking Proportionally	1: Circles and Ratio	1: Pi: The Ultimate Ratio: Exploring the Ratio of Circle Circumference to Diameter pp. M1-7-M1-18
		MATHia Software	1: Thinking Proportionally	1: Circles	1: Investigating Circles

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.GM.4c	Explore the relationship between circumference and area using a visual model.	Textbook	1: Thinking Proportionally	1: Circles and Ratio	2: That's a Spicy Pizza: Area of Circles pp. M1-18–M1-32
		MATHia Software	1: Thinking Proportionally	1: Circles	2: Calculating Circumference and Area of Circles
7.GM.4d	Use the formulas for circumference and area of circles appropriately to solve real-world and mathematical problems	Textbook	1: Thinking Proportionally	1: Circles and Ratio	2: That's a Spicy Pizza: Area of Circles pp. M1-18–M1-32 3: Circular Reasoning: Solving Area and Circumference Problems pp. M1-32–M1-42
		MATHia Software	1: Thinking Proportionally	1: Circles	2: Calculating Circumference and Area of Circles
7.GM.5	Write equations to solve problems involving the relationships between angles formed by two intersecting lines, including supplementary, complementary, vertical, and adjacent.	Textbook	5: Constructing and Measuring	1: Angles, Triangles, and Quadrilaterals	2: Special Delivery: Special Angle Relationships pp. M5-19–M5-38
		MATHia Software	5: Constructing and Measuring	1: Angle Properties	1: Calculating Angles 2: Classifying Angles and Determining Unknown Measures
7.GM.6	Apply the concepts of two- and three-dimensional figures to real-world and mathematical situations	Textbook	5: Constructing and Measuring	2: Three-Dimensional Figures	4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-147–M5-160
7.GM.6a	Understand that the concept of area is applied to two-dimensional figures such as triangles, quadrilaterals, and polygons.	Textbook	1: Thinking Proportionally	4: Proportional Relationships	4: More Ups and Downs: Percent Increase and Percent Decrease pp. M1-209–M1-222
			5: Constructing and Measuring	2: Three-Dimensional Figures	4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-147–M5-160 5: More Than Four Sides of the Story: Volume and Surface Area of Prisms and Pyramids pp. M5-161–M5-174
7.GM.6b	Understand that the concepts of volume and surface area are applied to three-dimensional figures such as cubes, right rectangular prisms, and right triangular prisms.	Textbook	1: Thinking Proportionally	4: Proportional Relationships	4: More Ups and Downs: Percent Increase and Percent Decrease pp. M1-209–M1-222
			5: Constructing and Measuring	2: Three-Dimensional Figures	3: Hey, Mister, Got Some Bird Seed?: Volume of Pyramids pp. M5-125–M5-146 4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-147–M5-160 5: More Than Four Sides of the Story: Volume and Surface Area of Prisms and Pyramids pp. M5-161–M5-174

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.GM.6c	Decompose cubes, right rectangular prisms, and right triangular prisms into rectangles and triangles to derive the formulas for volume and surface area.	Textbook	5: Constructing and Measuring	2: Three-Dimensional Figures	3: Hey, Mister, Got Some Bird Seed?: Volume of Pyramids pp. M5-125–M5-146
					4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-147–M5-160
7.GM.6d	Use the formulas for area, volume, and surface area appropriately.	Textbook	1: Thinking Proportionally	4: Proportional Relationships	4: More Ups and Downs: Percent Increase and Percent Decrease pp. M1-209–M1-222
			5: Constructing and Measuring	2: Three-Dimensional Figures	3: Hey, Mister, Got Some Bird Seed?: Volume of Pyramids pp. M5-125–M5-146
		MATHia Software	5: Constructing and Measuring	3: Volume of Prisms and Pyramids	4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-147–M5-160
					5: More Than Four Sides of the Story: Volume and Surface Area of Prisms and Pyramids pp. M5-161–M5-174
					1: Understanding Volume Formulas for Right Prisms
					2: Using Volume of Right Prisms
3: Calculating Volume of Pyramids					
4: Using Volume of Pyramids					
7.DSP.1	Investigate concepts of random sampling	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	1: We Want to Hear From You!: Collecting Random Samples pp. M4-133–M4-150
		MATHia Software	5: Constructing and Measuring	3: Numerical Data Displays Comparisons	2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151–M4-168
7.DSP.1a	Understand that a sample is a subset of a population and both possess the same characteristics.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	1: Using Statistics to Draw Inferences About a Population
		MATHia Software	5: Constructing and Measuring	3: Numerical Data Displays Comparisons	1: We Want to Hear From You!: Collecting Random Samples pp. M4-133–M4-150
					2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151–M4-168
					1: Using Statistics to Draw Inferences About a Population

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.DSP.1b	Differentiate between random and non-random sampling.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	1: We Want to Hear From You!: Collecting Random Samples pp. M4-133-M4-150 2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151-M4-168
		MATHia Software	5: Constructing and Measuring	3: Numerical Data Displays Comparisons	1: Using Statistics to Draw Inferences About a Population
7.DSP.1c	Understand that generalizations from a sample are valid only if the sample is representative of the population	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	1: We Want to Hear From You!: Collecting Random Samples pp. M4-133-M4-150 2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151-M4-168
		MATHia Software	5: Constructing and Measuring	3: Numerical Data Displays Comparisons	1: Using Statistics to Draw Inferences About a Population
7.DSP.1d	Understand that random sampling is used to gather a representative sample and supports valid inferences about the population.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	1: We Want to Hear From You!: Collecting Random Samples pp. M4-133-M4-150 2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151-M4-168
		MATHia Software	5: Constructing and Measuring	3: Numerical Data Displays Comparisons	1: Using Statistics to Draw Inferences About a Population
7.DSP.2	Draw inferences about a population by collecting multiple random samples of the	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	2: Tiles, Gumballs, and Pumpkins: Using Random Samples to Draw Inferences pp. M4-151-M4-168
7.DSP.3	Visually compare the centers, spreads, and overlap of two displays of data (i.e., dot plots, histograms, box plots) that are graphed on the same scale and draw inferences about this data.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	3: Spicy or Dark?: Comparing Two Populations pp. M4-169-M4-180 4: Finding Your Spot to Live: Using Random Samples from Two Populations to Draw Conclusions pp. M4-181-M4-204
		MATHia Software	4: Analyzing Populations and Probabilities	3: Numerical Data Displays Comparisons	2: Comparing Characteristics of Data Displays 3: Comparing Populations Using Data Displays
7.DSP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	4: Finding Your Spot to Live: Using Random Samples from Two Populations to Draw Conclusions pp. M4-181-M4-204

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.DSP.5	Investigate the concept of probability of chance events.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5a	Determine probabilities of simple events	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5b	Understand that probability measures likelihood of a chance event occurring	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5c	Understand that the probability of a chance event is a number between 0 and 1.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5d	Understand that a probability closer to 1 indicates a likely chance event	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5e	Understand that a probability close to 1/2 indicates that a chance event is neither likely nor unlikely.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
7.DSP.5f	Understand that a probability closer to 0 indicates an unlikely chance event	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7 – M4-20
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.DSP.6a	Determine approximate outcomes using theoretical probability	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	3: Toss the Cup: Determining Experimental Probability of Simple Events pp. M4-33-M4-46
					4: A Simulating Conversation: Simulating Simple Events pp. M4-47-M4-64
		2: Compound Probability		1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73-M4-88	
		MATHia Software		1: Introduction to Probability	2: Comparing Experimental and Theoretical Probabilities
7.DSP.6b	Perform experiments that model theoretical probability	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	3: Toss the Cup: Determining Experimental Probability of Simple Events pp. M4-33-M4-46
					4: A Simulating Conversation: Simulating Simple Events pp. M4-47-M4-64
		2: Compound Probability		1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73-M4-88	
				4: On a Hot Streak: Simulating Probability of Compound Events pp. M4-113-M4-124	
7.DSP.6c	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	4: On a Hot Streak: Simulating Probability of Compound Events pp. M4-113-M4-124
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	2: Comparing Experimental and Theoretical Probabilities
7.DSP.7	Apply the concepts of theoretical and experimental probabilities for simple events	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	2: Give the Models a Chance: Probability Models pp. M4-23-M4-32
7.DSP.7a	Differentiate between uniform and non-uniform probability models (distributions).	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	2: Give the Models a Chance: Probability Models pp. M4-23-M4-32
				2: Compound Probability	3: Pet Shop Probability: Determining Compound Probability pp. M4-101-M4-112

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.DSP.7b	Develop both uniform and non-uniform probability models	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	2: Give the Models a Chance: Probability Models pp. M4-23–M4-32
				2: Compound Probability	1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73–M4-88
					2: Three Girls and No Boys?: Using Tree Diagrams pp. M4-89–M4-100
3: Pet Shop Probability: Determining Compound Probability pp. M4-101–M4-112					
7.DSP.7c	Perform experiments to test the validity of probability models	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	2: Give the Models a Chance: Probability Models pp. M4-23–M4-32
					3: Toss the Cup: Determining Experimental Probability of Simple Events pp. M4-33–M4-46
					4: A Simulating Conversation: Simulating Simple Events pp. M4-47–M4-64
7.DSP.8a	Understand that the probability of a compound event is between 0 and 1	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73–M4-88
		MATHia Software	4: Analyzing Populations and Probabilities	2: Compound Probability	3: Pet Shop Probability: Determining Compound Probability pp. M4-101–M4-112
7.DSP.8b	Identify the outcomes in a sample space using organized lists, tables, and tree diagrams.	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73–M4-88
		MATHia Software	4: Analyzing Populations and Probabilities	2: Compound Probability	2: Three Girls and No Boys?: Using Tree Diagrams pp. M4-89–M4-98
					3: Pet Shop Probability: Determining Compound Probability pp. M4-101–M4-112
					1: Introduction to Compound Events
					2: Calculating Compound Probabilities

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit(MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.DSP.8c	Determine probabilities of compound events using organized lists, tables, and tree diagrams	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73–M4-88 2: Three Girls and No Boys?: Using Tree Diagrams pp. M4-89–M4-98 3: Pet Shop Probability: Determining Compound Probability pp. M4-101–M4-112
		MATHia Software	4: Analyzing Populations and Probabilities	2: Compound Probability	1: Introduction to Compound Events
7.DSP.8d	Design and use a simulation to generate frequencies for compound events.	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	4: On a Hot Streak: Simulating Probability of Compound Events pp. M4-113–M4-124
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability 2: Compound Probability	3: Simulating Simple Events 3: Simulating Compound Events
7.DSP.8e	Compare theoretical and experimental probabilities for compound events	Textbook	4: Analyzing Populations and Probabilities	2: Compound Probability	4: On a Hot Streak: Simulating Probability of Compound Events pp. M4-113–M4-124