

## Table of Contents

<b>7.RP.A.1</b> .....	<b>1</b>	<b>7.EE.B.4b</b> .....	<b>7</b>
<b>7.RP.A.2</b> .....	<b>1</b>	<b>7.G.A.1</b> .....	<b>8</b>
<b>7.RP.A.2a</b> .....	<b>1</b>	<b>7.G.A.2</b> .....	<b>8</b>
<b>7.RP.A.2b</b> .....	<b>1</b>	<b>7.G.B.3</b> .....	<b>8</b>
<b>7.RP.A.2c</b> .....	<b>1</b>	<b>7.G.B.4</b> .....	<b>8</b>
<b>7.RP.A.2d</b> .....	<b>2</b>	<b>7.G.B.5</b> .....	<b>9</b>
<b>7.RP.A.3</b> .....	<b>2</b>	<b>7.SP.A.1</b> .....	<b>9</b>
<b>7.NS.A.1</b> .....	<b>2</b>	<b>7.SP.A.2</b> .....	<b>9</b>
<b>7.NS.A.1a</b> .....	<b>3</b>	<b>7.SP.B.3</b> .....	<b>9</b>
<b>7.NS.A.1b</b> .....	<b>3</b>	<b>7.SP.B.4</b> .....	<b>10</b>
<b>7.NS.A.1c</b> .....	<b>3</b>	<b>7.SP.C.5</b> .....	<b>10</b>
<b>7.NS.A.1d</b> .....	<b>3</b>	<b>7.SP.C.6</b> .....	<b>10</b>
<b>7.NS.A.2</b> .....	<b>3</b>	<b>7.SP.C.7</b> .....	<b>10</b>
<b>7.NS.A.2a</b> .....	<b>3</b>	<b>7.SP.C.7a</b> .....	<b>11</b>
<b>7.NS.A.2b</b> .....	<b>4</b>	<b>7.SP.C.7b</b> .....	<b>11</b>
<b>7.NS.A.2c</b> .....	<b>4</b>	<b>7.SP.D.8a</b> .....	<b>12</b>
<b>7.NS.A.2d</b> .....	<b>4</b>	<b>7.SP.D.8b</b> .....	<b>12</b>
<b>7.NS.A.3</b> .....	<b>4</b>		
<b>7.NS.A.3</b> .....	<b>5</b>		
<b>7.EE.A.1</b> .....	<b>5</b>		
<b>7.EE.A.2</b> .....	<b>5</b>		
<b>7.EE.B.3</b> .....	<b>5</b>		
<b>7.EE.B.3a</b> .....	<b>6</b>		
<b>7.EE.B.3b</b> .....	<b>6</b>		
<b>7.EE.B.4</b> .....	<b>6</b>		
<b>7.EE.B.4a</b> .....	<b>6</b>		
<b>7.EE.B.4a</b> .....	<b>7</b>		

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.RP.A.1</b>	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in 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: Comparing Rates
<b>7.RP.A.2</b>	Recognize and represent proportional relationships between quantities.	Textbook	1: Thinking Proportionally	3: Proportionality	4: Minding Your Ps and Qs: Constant of Proportionality in Multiple Representations pp. M1-139–M1-152
<b>7.RP.A.2a</b>	Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin).	Textbook	1: Thinking Proportionally	3: Proportionality	1: How Does Your Garden Grow?: Proportional Relationships pp. M1-91–M1-108
		MATHia Software	1: Thinking Proportionally	4: Representing Proportional Relationships by Equations	1: Introduction to Direct Variation 5: Determining Characteristics of Direct Variation Graphs
<b>7.RP.A.2b</b>	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	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	1: Introduction to Direct Variation 2: Writing Direct Variation Equations 3: Converting Between Proportions and Direct Variation Equations 4: Modeling Direct Variation
		Textbook	1: Thinking Proportionally	2: Fractional Rates	3: Tagging Sharks: Solving Proportions Using Means and Extremes pp. M1-69–M1-82
		MATHia Software	1: Thinking Proportionally	3: Proportional Reasoning	2: Complying with Title IX: Constant of Proportionality pp. M1-109–M1-126 1: Solving Proportions Using Equivalent Ratios 2: Solving Proportions Using Means and Extremes
<b>7.RP.A.2c</b>	Represent proportional relationships by equations.	MATHia Software	1: Thinking Proportionally	4: Representing Proportional Relationships by Equations	2: Writing Direct Variation Equations 3: Converting Between Proportions and Direct Variation Equations

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.RP.A.2d</b>	Explain what a point (x,y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0,0) and (1, r) where r is the unit rate.	Textbook	1: Thinking Proportionally	3: Proportionality	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	4: Modeling Direct Variation
<b>7.RP.A.3</b>	Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	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 Percent Using Proportional Relationships	1: Calculating Percent Change and Final Amounts 2: Using Percents and Percent Change
<b>7.NS.A.1</b>	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	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	1: Adding and Subtracting Negative Integers 2: Using Number Lines to Add and Subtract Integers

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
7.NS.A.1a	Describe situations in which opposite quantities combine to make 0.	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
					3: Two-Color Counters: Adding Integers, Part II pp. M2-31–M2-48
7.NS.A.1b	Understand $p + q$ as the number located a distance $ q $ from $p$ , in the positive or negative direction depending on whether $q$ is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	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
					2: Walk the Line: Adding Integers, Part I pp. M2-17–M2-30
					3: Two-Color Counters: Adding Integers, Part II pp. M2-31–M2-48
7.NS.A.1c	Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	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
					4: What's the Difference?: Subtracting Integers pp. M2-49–M2-68
7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.	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
				2: Multiplying and Dividing Rational Numbers	4: Properties of Operations: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134
7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	3: Multiplying and Dividing Integers
7.NS.A.2a	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	1: Equal Groups: Multiplying and Dividing Integers pp. M2-89–M2-102

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.NS.A.2b</b>	Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If $p$ and $q$ are integers then $-(p/q) = (-p)/q = p/(-q)$ . Interpret quotients of rational numbers by describing real-world contexts.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	2: Be Rational!: Quotients of Integers pp. M2-103–M2-112
<b>7.NS.A.2c</b>	Apply properties of operations as strategies to multiply and divide rational numbers.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	4: Properties Schmo-properties: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134
<b>7.NS.A.2d</b>	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	Textbook	2: Operating with Signed Numbers	2: Multiplying and Dividing Rational Numbers	2: Be Rational!: Quotients of Integers pp. M2-103–M2-112
		MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	4: Converting Rational Numbers to Decimals
<b>7.NS.A.3</b>	Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)	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	1: Integer Operations	4: Properties Schmo-properties: Using Number Properties to Interpret Expressions with Signed Numbers pp. M2-125–M2-134
					5: Contrasting Addition and Subtraction with Multiplication and Division to Simplify Numeric Expressions
					6: Using Order of Operations to Simplify Numeric Expressions with Four Operations
7: Using Order of Operations to Simplify Numeric Expressions with Parentheses and Exponents					

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.NS.A.3</b>	Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)	MATHia Software	2: Operating with Signed Numbers	1: Integer Operations	8: Using Order of Operations to Simplify Numeric Expressions in Complex Configurations
					9: Using Order of Operations to Simplify Numeric Expressions
<b>7.EE.A.1</b>	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	2: Mathematics 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: Contrasting Addition and Subtraction with Multiplication and Division to Simplify Algebraic Expressions
					3: Using Order of Operations to Simplify Algebraic Expressions with Four Operations
					4: Using Order of Operations to Simplify Algebraic Expressions with Parentheses and Exponents
5: Using Order of Operations to Simplify Algebraic Expression in Complex Configurations					
6: Using Order of Operations to Simplify Algebraic Expressions					
<b>7.EE.A.2</b>	Understand that rewriting an expression in different forms in a contextual problem can provide multiple ways of interpreting the problem and how the quantities in it are related.	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. M3-139–M3-154
<b>7.EE.B.3</b>	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers presented in any form (whole numbers, fractions, and decimals).	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	1: No Substitute for Hard Work: Evaluating Algebraic Expressions pp. M3-7–M3-18
		MATHia Software	3: Reasoning Algebraically	6: Problem Solving with Two-Step Equations and Inequalities	1: Using Linear Equations and Inequalities
					2: Solving Problems with Integers
3: Solving Problems with Decimals and Fractions					

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.EE.B.3a</b>	Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate.	Textbook	3: Reasoning Algebraically	1: Algebraic Expressions	1: No Substitute for Hard Work: Evaluating Algebraic Expressions pp. M3-7–M3-18
		MATHia Software	3: Reasoning Algebraically	6: Problem Solving with Two-Step Equations and Inequalities	1: Using Linear Equations and Inequalities
					2: Solving Problems with Integers
3: Solving Problems with Decimals and Fractions					
<b>7.EE.B.3b</b>	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
<b>7.EE.B.4</b>	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Textbook	3: Reasoning Algebraically	3: Multiple Representations of Equations	4: Texas Tea and Temperature: Using Multiple Representations to Solve Problems pp. M3-169–M3-180
		MATHia Software	3: Reasoning Algebraically	2: Modeling Two-Step Expressions and Equations	1: Using Picture Algebra with Equations
				6: Problem Solving with Two-Step Equations and Inequalities	2: Modeling Two-Step Equations
<b>7.EE.B.4a</b>	Solve contextual problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	1: Picture Algebra: Modeling Equations by Equal Expressions pp. M3-53–M3-64

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)			
<b>7.EE.B.4a</b>	Solve contextual problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	Textbook	3: Reasoning Algebraically	2: Two-Step Equations and Inequalities	2: Expressions That Play Together...: Solving Equations on a Double Number Line pp. M3-65–M3-76 3: Formally Yours: Using Inverse Operations to Solve Equations pp. M3-77–M3-94			
				3: Multiple Representations of Equations	1: Put It on the Plane: Representing Equations with Tables and Graphs pp. M3-125–M3-138 2: Stretches, Stacks, and Structure: Structure of Linear Equations pp. M3-139–M3-154			
					MATHia Software	3: Reasoning Algebraically	3: Solving Two-Step Equations	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
				4: Solving Linear Equations with Similar Terms				1: Solving By Combining Like Variable Terms and a Constant with Integers (No Type In) 2: Solving by Combining Like Variable Terms and a Constant with Integers (Type In) 3: Solving by Combining Like Variable Terms and a Constant with Decimals (No Type In) 4: Solving by Combining Like Variable Terms and a Constant with Decimals (Type In)
		6: Problem Solving with Two-Step Equations and Inequalities	2: Solving Problems with Integers 3: Solving Problems with Decimals and Fractions					
		7: The Coordinate Plane and Two-Step Equations	1: Graphs of Equations 2: Using the Graphs to Solve Equations					
		Textbook	3: Reasoning Algebraically					2: Two-Step Equations and Inequalities
				3: Multiple Representations of Equations				3: Deep Flight I: Building Inequalities and Equations to Solve Problems pp. M3-155–M3-168
		MATHia Software	3: Reasoning Algebraically	5: Solving Two-Step Linear Inequalities			1: Graphing Inequalities with Rational Numbers 2: Solving Two-Step Linear Inequalities	



Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.G.A.1</b>	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	8: Scale Drawings	1: Using Scale Drawings 2: Using Scale Factor
<b>7.G.A.2</b>	Draw geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Textbook	5: Constructing and Measuring	1: Angles and Triangles	1: Here's Lookin' at Euclid: Geometric Constructions pp. M5-7-M5-18
					3: Consider Every Side: Constructing Triangles Given Sides pp. M5-39-M5-52
					4: Unique or Not?: Constructing Triangles Given Angles pp. M5-53-M5-66
<b>7.G.B.3</b>	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area 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
					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	1: Investigating Circles 2: Calculating Circumference and Area of Circles
<b>7.G.B.4</b>	Know and use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Textbook	5: Constructing and Measuring	1: Angles and Triangles	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

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.G.B.5</b>	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right 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. M5-107–M5-128
					4: The Sound of Surface Area: Surface Area of Pyramids pp. M5-129–M5-142
		MATHia Software	5: Constructing and Measuring	3: Volume of Prisms and Pyramids	5: More Than Four Sides of the Story: Volume and Surface Area of Prisms and Pyramids pp. M5-143–M5-156
					1: Using Volume of Right Prisms
<b>7.SP.A.1</b>	Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	Textbook	4: Analyzing Populations and Probabilities	3: Drawing Inferences	2: Calculating Volume of Pyramids
					3: Using Volume of Pyramids
<b>7.SP.A.2</b>	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	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
<b>7.SP.A.2</b>	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	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
<b>7.SP.B.3</b>	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.	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
<b>7.SP.B.3</b>	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.	MATHia Software	4: Analyzing Populations and Probabilities	3: Numerical Data Displays Comparisons	1: Comparing Characteristics of Data Displays
					2: Comparing Populations Using Data Displays

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.SP.B.4</b>	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
<b>7.SP.C.5</b>	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Rolling, Rolling, Rolling...: Defining and Representing Probability pp. M4-7–M4-22
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Determining Probabilities
<b>7.SP.C.6</b>	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	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	4: Analyzing Populations and Probabilities	1: Introduction to Probability	4: On a Hot Streak: Simulating Probability of Compound Events pp. M4-113–M4-124
<b>7.SP.C.7</b>	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Give the Models a Chance: Probability Models pp. M4-23–M4-32
				2: Compound Probability	2: Three Girls and No Boys?: Using Tree Diagrams pp. M4-89–M4-100

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit( MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>7.SP.C.7a</b>	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of event.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Give the Models a Chance: Probability Models pp. M4-23–M4-32
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	4: A Simulating Conversation: Simulating Simple Events pp. M4-47–M4-64
<b>7.SP.C.7b</b>	Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.	Textbook	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Give the Models a Chance: Probability Models pp. M4-23–M4-32
				2: Compound Probability	3: Toss the Cup: Determining Experimental Probability of Simple Events pp. M4-33–M4-46
		MATHia Software	4: Analyzing Populations and Probabilities	1: Introduction to Probability	1: Evens or Odds?: Using Arrays to Organize Outcomes pp. M4-73–M4-88 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)
<b>7.SP.D.8a</b>	Give quantitative measures of center (median and/or mean) and variability (range), as well as describing any overall pattern with reference to the context in which the data were gathered.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25–M5-46
					3: Skyscrapers: Using Histograms to Display Data pp. M5-47–M5-60
				2: Numerical Summaries of Data	1: In the Middle: Analyzing Data Using Measures of Center pp. M5-71–M5-86
					2: Box It Up: Displaying the Five-Number Summary pp. M5-87–M5-104
		MATHia Software	5: Describing Variability of Quantities	1: Measures of Central Tendency	3: March MADness: Mean Absolute Deviation pp. M5-105–M5-116
					4: You Chose...Wisely: Choosing Appropriate Measures pp. M5-117–M5-130
MATHia Software	5: Describing Variability of Quantities	3: Mean Absolute Deviation	1: Calculating Mean, Median, Mode, and Range		
			1: Calculating Mean Absolute Deviation 2: Using Mean Absolute Deviation		
<b>7.SP.D.8b</b>	Relate the choice of measures of center to the shape of the data distribution and the context in which the data were gathered.	Textbook	5: Describing Variability of Quantities	2: Numerical Summaries of Data	4: You Chose...Wisely: Choosing Appropriate Measures pp. M5-117–M5-130
		MATHia Software	5: Describing Variability of Quantities	1: Measures of Central Tendency	3: Measuring the Effects of Changing Data Sets