

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
1	Thinking Proportionally	Fractional Rates	3	Proportional Reasoning	Proportional Relationships	Students review proportional relationships by recognizing proportions in ratios, tables, and graphs.	NEW: This is a new Concept Builder workspace.
					Rewriting Proportions as Products	Students notice patterns in proportions written in the form $a : b = c : d$. They rewrite proportions as the product of the means equal to the product of the extremes. Students isolate the variable in proportions with an unknown quantity. They solve problems using proportions and the means and extremes method.	NEW: This is a new Concept Builder workspace.
		Proportional Relationships	8	Calculating Sales Tax and Discounts	Analyzing Different Forms of Expressions	Students follow worked examples that show that expressions can be rewritten to describe sales tax and discount situations in many ways. Students rewrite expressions describing situations and interpret the rewritten expressions to highlight the different ways the expressions reveal different aspects of the	NEW: This is a new Concept Builder workspace.

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
						situations.	
			9	Scale Drawings	Critical Attributes of Similar Figures	Students watch an animation which uses an eclipse as a context to explain similarity. Students learn that the corresponding angles of similar figures are congruent and the corresponding side lengths are proportional. They use these attributes--corresponding angles and proportional side lengths--to identify similar figures and to show that congruent figures are also similar.	NEW: This is a new Concept Builder workspace.
2	Operating with Signed Numbers	Adding and Subtracting Rational Numbers	1	Integer Operations	Understanding Opposites	Students watch an animation that introduces opposite values and describes how opposite values on a number line have the same absolute value. The animation explains why direction and the meaning of 0 are important when thinking about opposite quantities in situations. Students determine the opposites of numbers, show that the sum of a number and its	NEW: This is a new Concept Builder workspace.

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
						opposite is 0, and use what they know about opposites to add positive and negative numbers in context.	
					Developing Algorithms for Adding or Subtracting Integers	Students connect number line models of sums of integers with the same sign to an algorithm for adding integers with the same sign. They do the same for the sums of integers with different signs. Students then notice that the models for subtracting integers are the same as the models for adding the opposite of the number. They rewrite subtraction expressions as addition expressions and use the rules for adding integers to determine the sum.	NEW: This is a new Concept Builder workspace.
3	Reasoning Algebraically	Two-Step Equations and Inequalities	2	Modeling Two-Step Expressions and Equations	Identifying Attributes of Linear Relationships	Students identify attributes of linear relationships from a scenario and from a graph by determining whether the starting value is positive or negative and whether the rate of	NEW: This is a new Concept Builder workspace.

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
						change is positive or negative. They interpret the model of a two-step linear equation.	
					Analyzing Models of Two-Step Linear Relationships	Students analyze scenarios of two-step linear relationships. They are given an equation that models the scenario. Students then match the different expressions in the equation to verbal descriptions of these quantities in the context of the scenario.	NEW: This is a new Mastery workspace.
			5	Problem Solving with Two-Step Equations and Inequalities	Determining the Value of an Independent Variable	Students start with a scenario, a table, and a graph to determine the value of an independent variable given the value of the dependent variable.	NEW: This is a new Concept Builder workspace.
4	Analyzing Populations and Probabilities	Introduction to Probability	1	Introduction to Probability	Simulating Simple Events	Students use simulations to model real-world scenarios.	NEW: This is a new Concept Builder workspace.
		Compound Probability	2	Compound Probability	Introduction to Compound Events	Students will extend what they know about simple events to compound events in the context of the game "Rock, Paper,	NEW: This is a new Concept Builder workspace.

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
						Scissors."	
					Simulating Compound Events	Students will use random number tables to simulate compound events and make inferences about those events.	NEW: This is a new Concept Builder workspace.
		Drawing Inferences	3	Numerical Data Displays Comparisons	Using Statistics to Draw Inferences About a Population	In this workspace, students will learn how to discriminate between scenarios that belong to a sample versus a population, understand that random sampling tends to produce valid inferences, develop an informal understanding of bias, and see how conclusions about a population are valid only if the sample is representative of that population.	NEW: This is a new Concept Builder workspace.
5	Constructing and Measuring	Three-Dimensional Figures	3	Volume of Prisms and Pyramids	Understanding Volume Formulas for Right Prisms	Students relate the variables in the volume formula for a right prism to measurements shown in a diagram. of a triangular prism. They map the parts of a triangular prism to the variables in the volume formula for a right prism. They then reason about how to determine an unknown	NEW: This is a new Concept Builder workspace.

National MSMS Course 2 2019-2020 MATHia Enhancements Release Notes

	Module	Topic		MATHia Unit	Workspace	Description	Enhancement
						measurement of a triangular prism given its volume.	