

1		The Real and Complex Number System				Strategies										
						Animations	Classifications	Explore Tools	Graphing Tools	Interactive Diagrams	Interactive Worksheets	Proof	Real-World Scenarios	Solvers	Worked Example	
MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery											
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 opposite is 0, and use what they know about opposites to add positive and negative numbers in context.	7.NS.1a 7.NS.1b	✓		•										•
	Adding and Subtracting Negative Integers	Students use an interactive number line to add and subtract negative numbers.	7.NS.1	✓							•					
	Using Number Lines to Add and Subtract Integers	Students practice adding and subtracting on number lines using a similar model to the one they used on the interactive number line.	7.NS.1		✓							•				
	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.	7.NS.1.b 7.NS.1.c	✓												
Proportional Reasoning and Percents	Using Proportions to Solve Percent Problems	Students examine partial worked examples to solve for the part, percent, or whole in percent problems using equivalent fractions and proportions.	7.RP.3	✓												
	Solving Simple Percent Problems	Students practice problems in which they solve for the part, the percent, or whole in percent problems using proportions.	7.RP.3	✓												

2		Operations & Algebraic Thinking				Strategies										
						Animations	Classifications	Explore Tools	Graphing Tools	Interactive Diagrams	Interactive Worksheets	Proof	Real-World Scenarios	Solvers	Worked Example	
MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery											
Variable Expressions	Factoring Linear Expressions	Students model the product of two factors and explore different factors of expressions through the use of an interactive tool. They use the Distributive Property in reverse to factor expressions.	7.EE.1	✓												
	Rewriting Simple Algebraic Expressions Involving Integer Coefficients	Students rewrite algebraic expressions that contain integer coefficients by combining like terms, using number properties, and applying the Order of Operations.	7.EE.1		✓											
	Rewriting Algebraic Expressions Involving Integer Coefficients with Four Operations	Students rewrite multi-step algebraic expressions that contain integer coefficients by combining like terms, using number properties, and applying the Order of Operations.	7.EE.1		✓											
	Rewriting Algebraic Expressions Involving Integer Coefficients with Parentheses and Exponents	Students rewrite algebraic expressions that contain integer coefficients, parentheses, and exponents by combining like terms, using number properties, and applying the Order of Operations.	7.EE.1		✓											
	Rewriting Complex Algebraic Expressions Involving Integer Coefficients	Students rewrite complex algebraic expressions that contain integer coefficients by combining like terms, using number properties, and applying the Order of Operations.	7.EE.1		✓											
	Rewriting Algebraic Expressions Involving Integer Coefficients	Students rewrite a variety of algebraic expressions that contain integer coefficients by combining like terms, using number properties, and applying the Order of Operations.	7.EE.1		✓											
Solving Two-Step Equations	Solving with Multiplication (No Type In)	Students solve two-step equations involving multiplication using the solver.	7.EE.4a		✓											
	Solving with Division (No Type In)	Students solve two-step equations involving division using the solver.	7.EE.4a		✓											
	Solving Two-Step Equations	Students solve two-step equations involving all four operations.	7.EE.4a		✓											
Solving Two-Step Inequalities	Solving Two-Step Linear Inequalities	Students solve two-step linear inequalities.	7.EE.4b		✓											

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MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery												
The Coordinate Plane and Two-Step Equations	Graphs of Equations	Students model and analyze the graphs of linear equations. Students identify key characteristics of the graphs and use them to interpret problem situations.	7.EE.4a	✓													
	Using Graphs to Solve Equations	Students watch an animation as they learn how to model the solution of a linear equation graphically. Students practice solving problems by modeling linear equations.	7.EE.4a	✓		•											

3		Geometry				Strategies										
						Animations	Classifications	Explore Tools	Graphing Tools	Interactive Diagrams	Interactive Worksheets	Proof	Real-World Scenarios	Solvers	Worked Example	
MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery											
Angle Properties	Calculating Angles	Students use an interactive circular protractor to measure angles and determine angle sums.	7.G.5	✓												
	Classifying Angles and Determining Unknown Measures	Students identify complementary, supplementary, and vertical angles. They write and solve equations to solve for unknown angle measures.	7.G.5	✓												
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.	7.GM.1	✓												
	Using Scale Drawings	Students analyze models to determine whether they are scale drawings of larger objects. They use scale factors and proportions to determine lengths and areas of scaled figures.	7.G.1	✓												
Circles	Calculating Circumference and Area of Circles	Students determine the circumference and area of circles using diagrams and real-world objects. Students work strategically to identify measurements and use the formula for circumference and area to solve problems.	7.G.4		✓											
Volume of Prisms	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 measurement of a triangular prism given its volume.	7.G.6	✓												
	Using Volume of Right Prisms	Students use the volume of right prisms to solve for unknown values.	7.G.6		✓											

4 Statistics		Strategies													
		Animations	Classifications	Explore Tools	Graphing Tools	Interactive Diagrams	Interactive Worksheets	Proof	Real-World Scenarios	Solvers	Worked Example				
MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery										
Drawing Inferences	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.	7.SP.1 7.SP.2	✓						•					
	Comparing Characteristics of Data Displays	Students compare the characteristics of data displays, specifying which numerical characteristics can be determined from each display.	7.SP.3		✓					•					
	Comparing Populations using Data Displays	Students use data displays to compare populations by determining the visual overlap and describing the difference between the measures of centers in terms of measures of variability.	7.SP.3		✓										
Introduction to Probability	Determining Probabilities	Students build probability models and determine probabilities of simple and disjoint events. They use proportions to make predictions based on samples and theoretical probabilities.	7.SP.C.5 7.SP.C.7a	✓						•				•	
	Comparing Experimental and Theoretical Probabilities	Students examine data from probability experiments and compare with theoretical probabilities. They use results of probability experiments to make conjectures about theoretical probabilities.	7.SP.C.6 7.SP.C.7b	✓						•					
	Introduction to Compound Events	Students will extend what they know about simple events to compound events in the context of the game "Rock, Paper, Scissors."	7.SP.8a	✓					•						
	Calculating Compound Probabilities	Students use simulation, tree diagrams, organized lists, and tables to determine compound probabilities.	7.SP.C.8b	✓					•						