

National HSMS Geometry 2019-2020 MATHia Enhancements Release Notes

Module		Topic	MATHia Unit	Workspace	Description	Enhancement
1	Reasoning with Shapes	Rigid Motions on a Plane	Rigid Motion	Exploring Rigid Motions and Dilations	Students use an interactive Explore Tool to perform translations, reflections, rotations, and dilations. Students also identify vertical and horizontal symmetry and observe and predict changes in the scale factors of dilations when they represent reductions, enlargements, or congruences. Students then describe sequences of geometric transformations that map one figure onto a congruent or similar figure.	NEW: This is a new Concept Builder workspace.
				Specifying a Sequence of Transformations	Students select multiple transformations from translation, rotation, dilation, and reflection about any line to match a pre-image to a target image, given a reference point.	NEW LOCATION: This workspace was previously last in this unit.
2	Establishing Congruence	Justifying Line and Angle Relationships	Introduction to Proofs with Segments and Angles	Completing Measure Proofs	Students complete the steps in a scaffolded proof, supplying appropriate statements and reasons to prove a variety of fundamental angle and segment theorems.	NEW LOCATION: This workspace was transposed with Connecting Steps in Angle Proofs .
				Connecting Steps in Angle Proofs	Students arrange the steps of more complex proofs into logical order.	NEW LOCATION: This workspace was transposed with Completing Measure Proofs .
			Proving Triangles Congruent	Proving Triangles Congruent using SAS and SSS	Students prove triangles congruent using the side-angle-side and side-side-side congruence theorems in a variety of diagrams.	UNIT CHANGE: The Proving Triangles Congruent using HL and HA was moved to the <i>Extending Triangle Congruence Theorems</i> unit and Proving Theorems using

National HSMS Geometry 2019-2020 MATHia Enhancements Release Notes

Module	Topic	MATHia Unit	Workspace	Description	Enhancement	
					Congruent Triangles was moved to the <i>Using Triangle Congruence Theorem</i> unit.	
		NEW UNIT: Using Triangle Congruence	Proving Theorems using Congruent Triangles	Students use congruent triangle theorems to prove the perpendicular bisector theorem, isosceles triangle base angle theorem and its converse, and the angle bisector theorem.	NEW UNIT: This unit was previously named <i>Triangle Theorems</i> and the Proving Theorems Using Congruent Triangles workspace was added.	
		NEW UNIT: Angles and Circles	Determining Interior and Exterior Angles in Circles	Students calculate the measure of an arc or an angle using Interior Angles of a Circle Theorem and Exterior Angles of a Circle Theorem.	NEW LOCATION/NEW UNIT: This workspace was moved here from the <i>Arc Length</i> unit.	
	Using Congruence Theorems	NEW UNIT: Extending Triangle Congruence Theorems	Proving Triangles Congruent using HL and HA	Students prove triangles congruent using the hypotenuse-leg and hypotenuse-angle congruence theorems in a variety of diagrams.	NEW LOCATION/NEW UNIT: This workspace was moved here from the <i>Proving Triangles Congruent</i> unit.	
3]Investigating Proportionality	Similarity	Similar Triangles	Partitioning Segments in Given Ratios	Students watch an animation describing the usefulness of directed line segments and how to interpret fractions of directed segments. Students observe directed line segments divided into two lengths by a point and determine the ratio of those lengths, starting with horizontal and vertical line segments and then moving to non-vertical and non-horizontal segments.	NEW: This is a new Concept Builder workspace.

National HSMS Geometry 2019-2020 MATHia Enhancements Release Notes

Module	Topic	MATHia Unit	Workspace	Description	Enhancement
			Sketching Quadratic Functions	Sketch a quadratic function given factored, standard or vertex form	NEW LOCATION: Previously in Forms of Quadratics unit
			Using One Trigonometric Ratio to Solve Problems	Students calculate the measures of sides and angles of a right triangle using trigonometric ratios, the Pythagorean Theorem, and/or the Triangle Sum Theorem in both contextual and abstract problems.	NEW LOCATION: Previously in the <i>Right Triangles and Trigonometric Ratios</i> unit. That unit no longer exists.
			Using Multiple Trigonometric Ratios to Solve Problems	Students calculate the measures of sides and angles of two right triangles that share a side using trigonometric ratios, the Pythagorean Theorem, and/or the Triangle Sum Theorem in both contextual and abstract problems.	NEW LOCATION: Previously in the <i>Right Triangles and Trigonometric Ratios</i> unit. That unit no longer exists.