IXL Skill Alignment

Geo alignment for HMH California

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Module 1

Tools of Geometry

Textbook section	IXL skills	
1.1: Segment Length and Midpoints	**B.1**	Lines, line segments, and rays >>
	B.3	Additive property of length >>
	B.7	Midpoint formula - find the midpoint >>
	B.9	Distance formula >>
1.2: Angle Measures and Angle Bisectors	**C.1**	Angle vocabulary >>
	C.2	Angle measures >>
	C.5	Angle bisectors >>
1.3: Representing and Describing Transformations	**L.1**	Classify congruence transformations >>
1.4: Reasoning and Proof	**I.1**	Identify hypotheses and conclusions >>
	I.2	Counterexamples >>
	I.3	Conditionals >>

Module 2

Transformations and Symmetry

Textbook section	IXL skills	
2.1: Translations	**L.2**	Translations: graph the image >>
	L.3	Translations: find the coordinates >>
	L.4	Translations: write the rule >>
2.2: Reflections	**L.5**	Reflections: graph the image >>
	L.6	Reflections: find the coordinates >>
2.3: Rotations	**L.8**	Rotations: graph the image >>
	L.9	Rotations: find the coordinates >>
2.4: Investigating Symmetry	**O.1**	Line symmetry >>
	O.2	Rotational symmetry >>
	O.3	Draw lines of symmetry >>
	O.4	Count lines of symmetry >>

Module 3

Congruent Figures

Textbook section	IXL skills	
3.1: Sequences and Transformations	**L.10**	Compositions of congruence transformations: graph the image >>
	L.12	Congruence transformations: mixed review >>
3.2: Proving Figures Are Congruent Using Rigid Motions		
3.3: Corresponding Parts of Congruent Figures Are Congruent	**J.1**	Congruence statements and corresponding parts >>
	J.2	Solve problems involving corresponding parts >>

Module 4

Lines and Angles

Textbook section	IXL skills	
4.1: Angles Formed by Intersecting Lines	**C.3**	Identify complementary, supplementary, vertical, adjacent, and congruent angles >>
	C.4	Find measures of complementary, supplementary, vertical, and adjacent angles >>
4.2: Transversals and Parallel Lines	**D.3**	Transversals: name angle pairs >>
	D.4	Transversals of parallel lines: find angle measures >>
4.3: Proving Lines Are Parallel	**D.6**	Proofs involving parallel lines I >>
4.4: Perpendicular Lines	**C.8**	Proofs involving angles >>
	D.2	Construct a perpendicular line >>
4.5: Equations of Parallel and perpendicular Lines	**E.2**	Slopes of lines >>
	E.5	Slopes of parallel and perpendicular lines >>
	E.6	Equations of parallel and perpendicular lines >>

Module 5

Triangle Congruence Criteria

Textbook section	IXL skills	
5.1: Exploring What Makes Triangles Congruent		
5.2: ASA Triangle Congruence		
5.3: SAS Triangle Congruence		
5.4: SSS Triangle Congruence	**K.1**	SSS and SAS Theorems >>
	K.2	Proving triangles congruent by SSS and SAS >>

Module 6

Applications of Triangle Congruence

Textbook section	IXL skills	
6.1: Justifying Constructions		
6.2: AAS Triangle Congruence	**K.3**	ASA and AAS Theorems >>
	K.4	Proving triangles congruent by ASA and AAS >>
	K.5	SSS, SAS, ASA, and AAS Theorems >>
	K.7	Proving triangles congruent by SSS, SAS, ASA, and AAS >>
6.3: HL Triangle Congruence	**K.11**	Hypotenuse-Leg Theorem >>

Module 7

Properties of Triangles

Textbook section	IXL skills	
7.1: Interior and Exterior Angles	**F.2**	Triangle Angle-Sum Theorem >>
	F.3	Exterior Angle Theorem >>
	G.2	Interior angles of polygons >>
7.2: Isosceles and Equilateral Triangles	**K.9**	Congruency in isosceles and equilateral triangles >>
	K.10	Proofs involving isosceles triangles >>
7.3: Triangle Inequalities	**M.4**	Angle-side relationships in triangles >>
	M.5	Triangle Inequality Theorem >>

Module 8

Special Segments in Triangles

Textbook section	IXL skills	
8.1: Perpendicular Bisectors of Triangles	**M.2**	Triangles and bisectors >>
8.2: Angle Bisectors of Triangles	**C.5**	Angle bisectors >>
	M.6	Construct the circumcenter or incenter of a triangle >>
8.3: Medians and Altitudes of Triangles	**M.3**	Identify medians, altitudes, angle bisectors, and perpendicular bisectors >>
	M.7	Construct the centroid or orthocenter of a triangle >>
8.4: Midsegments of Triangles	**M.1**	Midsegments of triangles >>

Module 9

Properties of Quadrilaterals

Textbook section	IXL skills	
9.1: Properties of Parallelograms	**N.4**	Properties of parallelograms >>
9.2: Conditions for Parallelograms	**N.5**	Proving a quadrilateral is a parallelogram >>
9.3: Proprties of Rectangles, Rhombuses, and Squares	**N.6**	Properties of rhombuses >>
	N.7	Properties of squares and rectangles >>
9.4: Conditions for Rectangles, Rhombuses and Squares		
9.5: Properties and Conditions for Kites and Trapezoids	**N.8**	Properties of trapezoids >>
	N.9	Properties of kites >>
	N.10	Review: properties of quadrilaterals >>
	N.11	Proofs involving quadrilaterals I >>
	N.12	Proofs involving quadrilaterals II >>

Module 10

Coordinate Proof Using Slope and Distance

Textbook section	IXL skills	
10.1: Slope and Parallel Lines		
10.2: Slope and Perpendicular Lines		
10.3: Coordinate Proof Using Distance with Segments and Triangles	**K.6**	SSS Theorem in the coordinate plane >>
10.4: Coordinate Proof Using Distance with Quadrilaterals		
10.5: Perimeter and Area on the Coordinate Plane	**S.5**	Area and perimeter in the coordinate plane I >>
	S.6	Area and perimeter in the coordinate plane II >>

Module 11

Similarity and Transformations

Textbook section	IXL skills	
11.1: Dilations	**L.13**	Dilations: graph the image >>
	L.15	Dilations: scale factor and classification >>
11.2: Proving Figures Are Similar Using Transformations	**L.14**	Dilations: find the coordinates >>
	P.8	Similar triangles and similarity transformations >>
	P.9	Similarity of circles >>
11.3: Corresponding Parts of Similar Figures	**P.1**	Similarity ratios >>
	P.2	Similarity statements >>
	P.4	Side lengths and angle measures in similar figures >>
11.4: AA Similarity of Triangles	**P.7**	Similarity rules for triangles >>

Module 12

Using Similar Triangles

Textbook section	IXL skills	
12.1: Triangle Proportionality Theorem	**P.10**	Triangle Proportionality Theorem >>
	P.13	Prove proportions or angle congruences using similarity >>
12.2: Subdividing a Segment in a Given Ratio		
12.3: Using Proportional Relationships	**P.5**	Similar triangles and indirect measurement >>
12.4: Similarity in Right Triangles	**P.12**	Prove similarity statements >>
	P.14	Proofs involving similarity in right triangles >>
	P.15	Prove the Pythagorean theorem >>

Module 13

Trigonometry with Right Triangles

Textbook section	IXL skills	
13.1: Tangent Ratio		
13.2: Sine and Cosine Ratios	**R.1**	Trigonometric ratios: sin, cos, and tan >>
13.3: Special Right Triangles	**Q.4**	Special right triangles >>
	R.8	Trigonometric ratios: find a side length >>
	R.9	Trigonometric ratios: find an angle measure >>
13.4: Problem Solving with Trigonometry	**R.10**	Solve a right triangle >>

Module 14

Trigonometry with All Triangles

Textbook section	IXL skills	
14.1: Law of Sines	**R.11**	Law of Sines >>
14.2: Law of Cosines	**R.12**	Law of Cosines >>
	R.13	Solve a triangle >>

Module 15

Angles and Segments in Circles

Textbook section	IXL skills	
15.1: Central Angles and Inscribed Angles	**U.1**	Parts of a circle >>
	U.2	Central angles >>
	U.9	Inscribed angles >>
15.2: Angles in Inscribed Quadrilaterals	**U.11**	Angles in inscribed quadrilaterals I >>
	U.12	Angles in inscribed quadrilaterals II >>
15.3: Tangents and Circumscribed Angles	**U.7**	Tangent lines >>
	U.13	Construct a tangent line to a circle >>
15.4: Segment Relationships in Circles	**U.6**	Arcs and chords >>
15.5: Angle Relationships in Circles		

Module 16

Arc Length and Sector Area

Textbook section	IXL skills	
16.1: Justifying Circumference and Area of a Circle	**S.7**	Area and circumference of circles >>
16.2: Arc Length and Radian Measure	**U.3**	Arc measure and arc length >>
16.3: Sector Area	**U.4**	Area of sectors >>

Module 17

Equations of Circles and Parabolas

Textbook section	IXL skills	
17.1: Equation of a Circle	**V.1**	Find the center of a circle >>
	V.2	Find the radius or diameter of a circle >>
	V.3	Write equations of circles in standard form from graphs >>
	V.4	Write equations of circles in standard form using properties >>
	V.5	Convert equations of circles from general to standard form >>
	V.6	Find properties of circles from equations in general form >>
	V.7	Graph circles from equations in standard form >>
17.2: Equation of a Parabola		

Module 18

Volume Formulas

Textbook section	IXL skills	
18.1: Volume of Prisms and Cylinders	**T.4**	Volume of prisms and cylinders >>
18.2: Volume of Pyramids		
18.3: Volume of Cones	**T.5**	Volume of pyramids and cones >>
18.4: Volume of Spheres		

Module 19

Visualizing Solids

Textbook section	IXL skills	
19.1: Cross-Sections and Solids of Rotation	**H.4**	Cross-sections of three-dimensional figures >>
	H.5	Solids of revolution >>
19.2: Surface Area of Prisms and Cylinders	**H.3**	Nets and drawings of three-dimensional figures >>
	T.2	Surface area of prisms and cylinders >>
19.3: Surface Area of Pyramids and Cones	**T.3**	Surface area of pyramids and cones >>
19.4: Surface Area of Spheres	**T.6**	Surface area and volume of spheres >>

Module 20

Modeling and Problem Solving

Textbook section	IXL skills	
20.1: Scale Factor	**S.10**	Area and perimeter of similar figures >>
	T.8	Surface area and volume of similar solids >>
20.2: Modeling and Density		
20.3: Problem Solving with Constraints		

Module 21

Introduction to Probability

Textbook section	IXL skills	
21.1: Probability and Set Theory		
21.2: Permutations and Probability	**X.4**	Counting principle >>
	X.5	Permutations >>
21.3: Combinations and Probability	**X.6**	Permutation and combination notation >>
21.4: Mutually Exclusive and Overlapping Events	**X.1**	Theoretical and experimental probability >>

Module 22

Conditional Probability and Independence of Events

Textbook section	IXL skills	
22.1: Conditional Probability		
22.2: Independent Events		
22.3: Dependent Events	**X.3**	Independent and dependent events >>

Module 23

Probability and Decision Making

Textbook section	IXL skills
23.1: Using Probability to Make Fair Decisions	
23.2: Analyzing Decisions	