



IXL Skill Alignment

Geometry alignment for HMH Common Core Curriculum



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Module 1

Tools of Geometry

Textbook section	IXL skills
1.1: Segment Length and Midpoints	<ol style="list-style-type: none">1. Lines, line segments, and rays XFC2. Additive property of length 7RA3. Midpoint formula: find the midpoint 2YG4. Distance formula 59F
1.2: Angle Measures and Angle Bisectors	<ol style="list-style-type: none">1. Angle vocabulary 9U22. Angle measures BCQ3. Angle bisectors 68E
1.3: Representing and Describing Transformations	<ol style="list-style-type: none">1. Classify congruence transformations CXT
1.4: Reasoning and Proof	<ol style="list-style-type: none">1. Identify hypotheses and conclusions 7FW2. Counterexamples 2GJ3. Conditionals VU9

Module 2

Transformations and Symmetry

Textbook section	IXL skills
2.1: Translations	<ol style="list-style-type: none">1. Translations: graph the image 7AC2. Translations: find the coordinates F8U3. Translations: write the rule 9PR
2.2: Reflections	<ol style="list-style-type: none">1. Reflections: graph the image SM92. Reflections: find the coordinates SVY
2.3: Rotations	<ol style="list-style-type: none">1. Rotations: graph the image 6SD2. Rotations: find the coordinates ZX5
2.4: Investigating Symmetry	<ol style="list-style-type: none">1. Line symmetry WBX2. Rotational symmetry ERP3. Draw lines of symmetry JU74. Count lines of symmetry M7U

Module 3

Congruent Figures

Textbook section	IXL skills
3.1: Sequences and Transformations	<ol style="list-style-type: none">Sequences of congruence transformations: graph the image WHWCongruence transformations: mixed review XQ7
3.2: Proving Figures Are Congruent Using Rigid Motions	
3.3: Corresponding Parts of Congruent Figures Are Congruent	<ol style="list-style-type: none">Congruence statements and corresponding parts CYLSolve problems involving corresponding parts WYB

Module 4

Lines and Angles

Textbook section	IXL skills
4.1: Angles Formed by Intersecting Lines	<ol style="list-style-type: none">1. Identify complementary, supplementary, vertical, adjacent, and congruent angles 7P72. Find measures of complementary, supplementary, vertical, and adjacent angles VZU
4.2: Transversals and Parallel Lines	<ol style="list-style-type: none">1. Transversals: name angle pairs V852. Transversals of parallel lines: find angle measures WB9
4.3: Proving Lines Are Parallel	<ol style="list-style-type: none">1. Proofs involving parallel lines I CUV
4.4: Perpendicular Lines	<ol style="list-style-type: none">1. Proofs involving angles HV92. Construct a perpendicular line BZR
4.5: Equations of Parallel and perpendicular Lines	<ol style="list-style-type: none">1. Slopes of lines V2T2. Slopes of parallel and perpendicular lines 6K23. Equations of parallel and perpendicular lines VEB

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	<ol style="list-style-type: none">1. SSS and SAS Theorems 48Q2. Proving triangles congruent by SSS and SAS vVZ

Module 6

Applications of Triangle Congruence

Textbook section	IXL skills
6.1: Justifying Constructions	
6.2: AAS Triangle Congruence	<ol style="list-style-type: none">1. ASA and AAS Theorems N942. Proving triangles congruent by ASA and AAS 23Z3. SSS, SAS, ASA, and AAS Theorems LER4. Proving triangles congruent by SSS, SAS, ASA, and AAS SZL
6.3: HL Triangle Congruence	<ol style="list-style-type: none">1. Hypotenuse-Leg Theorem VQJ

Module 7

Properties of Triangles

Textbook section	IXL skills
7.1: Interior and Exterior Angles	<ol style="list-style-type: none">1. Triangle Angle-Sum Theorem UBU2. Exterior Angle Theorem TGK3. Interior angles of polygons SZF
7.2: Isosceles and Equilateral Triangles	<ol style="list-style-type: none">1. Congruency in isosceles and equilateral triangles HPR2. Proofs involving isosceles triangles V45
7.3: Triangle Inequalities	<ol style="list-style-type: none">1. Angle-side relationships in triangles ZN82. Triangle Inequality Theorem BW7

Module 8

Special Segments in Triangles

Textbook section	IXL skills
8.1: Perpendicular Bisectors of Triangles	1. Triangles and bisectors GWE
8.2: Angle Bisectors of Triangles	1. Angle bisectors 68E 2. Construct the circumcenter or incenter of a triangle EC6
8.3: Medians and Altitudes of Triangles	1. Identify medians, altitudes, angle bisectors, and perpendicular bisectors JWN 2. Construct the centroid or orthocenter of a triangle X8X
8.4: Midsegments of Triangles	1. Midsegments of triangles 8GT

Module 9

Properties of Quadrilaterals

Textbook section	IXL skills
9.1: Properties of Parallelograms	1. Properties of parallelograms LLK
9.2: Conditions for Parallelograms	1. Proving a quadrilateral is a parallelogram H89
9.3: Properties of Rectangles, Rhombuses, and Squares	1. Properties of rhombuses QVX 2. Properties of squares and rectangles R9M
9.4: Conditions for Rectangles, Rhombuses and Squares	
9.5: Properties and Conditions for Kites and Trapezoids	1. Properties of trapezoids UC9 2. Properties of kites LZ9 3. Review: properties of quadrilaterals Q2R 4. Proofs involving triangles and quadrilaterals V7W 5. Proofs involving quadrilaterals P77

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	1. SSS Theorem in the coordinate plane C5G
10.4: Coordinate Proof Using Distance with Quadrilaterals	
10.5: Perimeter and Area on the Coordinate Plane	1. Area and perimeter in the coordinate plane I QWZ 2. Area and perimeter in the coordinate plane II MHQ

Module 11

Similarity and Transformations

Textbook section	IXL skills
11.1: Dilations	<ol style="list-style-type: none">1. Dilations: graph the image ZRD2. Dilations: scale factor and classification ZDM
11.2: Proving Figures Are Similar Using Transformations	<ol style="list-style-type: none">1. Dilations: find the coordinates 5KZ2. Similar triangles and similarity transformations GZZ3. Similarity of circles NEP
11.3: Corresponding Parts of Similar Figures	<ol style="list-style-type: none">1. Similarity ratios BT72. Similarity statements UG83. Side lengths and angle measures in similar figures E2K
11.4: AA Similarity of Triangles	<ol style="list-style-type: none">1. Similarity rules for triangles XJQ

Module 12

Using Similar Triangles

Textbook section	IXL skills
12.1: Triangle Proportionality Theorem	<ol style="list-style-type: none">1. Triangle Proportionality Theorem 6WA2. Prove proportions or angle congruences using similarity DDY
12.2: Subdividing a Segment in a Given Ratio	
12.3: Using Proportional Relationships	<ol style="list-style-type: none">1. Similar triangles and indirect measurement JWK
12.4: Similarity in Right Triangles	<ol style="list-style-type: none">1. Prove similarity statements ETX2. Proofs involving similarity in right triangles XCT3. Prove the Pythagorean theorem JGT

Module 13

Trigonometry with Right Triangles

Textbook section	IXL skills
13.1: Tangent Ratio	
13.2: Sine and Cosine Ratios	1. Trigonometric ratios: sin, cos, and tan D5Z
13.3: Special Right Triangles	1. Special right triangles LDM 2. Trigonometric ratios: find a side length UZC 3. Trigonometric ratios: find an angle measure 49E
13.4: Problem Solving with Trigonometry	1. Solve a right triangle GPR

Module 14

Trigonometry with All Triangles

Textbook section	IXL skills
14.1: Law of Sines	1. Law of Sines ZEL
14.2: Law of Cosines	1. Law of Cosines 24X 2. Solve a triangle REQ

Module 15

Angles and Segments in Circles

Textbook section	IXL skills
15.1: Central Angles and Inscribed Angles	<ol style="list-style-type: none">1. Parts of a circle 4X22. Central angles and arc measures VZX3. Inscribed angles 98U
15.2: Angles in Inscribed Quadrilaterals	<ol style="list-style-type: none">1. Angles in inscribed quadrilaterals I 24Y2. Angles in inscribed quadrilaterals II 2Y5
15.3: Tangents and Circumscribed Angles	<ol style="list-style-type: none">1. Tangent lines CFV2. Construct a tangent line to a circle JSH
15.4: Segment Relationships in Circles	<ol style="list-style-type: none">1. Arcs and chords P63
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	1. Area and circumference of circles ZDX
16.2: Arc Length and Radian Measure	1. Arc length 7L9
16.3: Sector Area	1. Area of sectors XZQ

Module 17

Equations of Circles and Parabolas

Textbook section

17.1: Equation of a Circle

IXL skills

1. Find the center of a circle CJA
2. Find the radius or diameter of a circle VGW
3. Write equations of circles in standard form from graphs 8HJ
4. Write equations of circles in standard form using properties EXA
5. Convert equations of circles from general to standard form YM5
6. Find properties of circles from equations in general form EAJ
7. Graph circles from equations in standard form GVH

17.2: Equation of a Parabola

Module 18

Volume Formulas

Textbook section	IXL skills
18.1: Volume of Prisms and Cylinders	1. Volume of prisms and cylinders N5F
18.2: Volume of Pyramids	
18.3: Volume of Cones	1. Volume of pyramids and cones 7J3
18.4: Volume of Spheres	

Module 19

Visualizing Solids

Textbook section	IXL skills
19.1: Cross-Sections and Solids of Rotation	<ol style="list-style-type: none">1. Cross sections of three-dimensional figures 7Z42. Solids of revolution LKT
19.2: Surface Area of Prisms and Cylinders	<ol style="list-style-type: none">1. Nets and drawings of three-dimensional figures PKE2. Surface area of prisms and cylinders SWV
19.3: Surface Area of Pyramids and Cones	<ol style="list-style-type: none">1. Surface area of pyramids and cones 8WX
19.4: Surface Area of Spheres	<ol style="list-style-type: none">1. Volume of spheres 62N

Module 20

Modeling and Problem Solving

Textbook section	IXL skills
20.1: Scale Factor	1. Area and perimeter of similar figures 6J7 2. Surface area and volume of similar solids N9X
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	<ol style="list-style-type: none">1. Counting principle NMP2. Permutations 2A8
21.3: Combinations and Probability	<ol style="list-style-type: none">1. Permutation and combination notation YXM
21.4: Mutually Exclusive and Overlapping Events	<ol style="list-style-type: none">1. Theoretical and experimental probability 2L5

Module 22

Conditional Probability and Independence of Events

Textbook section	IXL skills
22.1: Conditional Probability	
22.2: Independent Events	
22.3: Dependent Events	1. Identify independent and dependent events GW9

Module 23

Probability and Decision Making

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