



# IXL Skill Alignment

Geo alignment for Eureka Math Common Core Curriculum

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# Module 1

## Congruence, Proof, and Constructions

Textbook section	IXL skills
<b>Topic A:</b> Basic Constructions	<b>B.10</b> Construct the midpoint or perpendicular bisector of a segment >>
	<b>C.6</b> Construct an angle bisector >>
	<b>D.2</b> Construct a perpendicular line >>
	<b>G.5</b> Construct an equilateral triangle or regular hexagon >>
	<b>M.6</b> Construct the circumcenter or incenter of a triangle >>
<b>Topic B:</b> Unknown Angles	<b>C.4</b> Find measures of complementary, supplementary, vertical, and adjacent angles >>
	<b>D.4</b> Transversals of parallel lines: find angle measures >>
	<b>D.6</b> Proofs involving parallel lines I >>
	<b>D.7</b> Proofs involving parallel lines II >>
	<b>F.2</b> Triangle Angle-Sum Theorem >>
	<b>F.3</b> Exterior Angle Theorem >>
	<b>M.8</b> Proofs involving triangles I >>
	<i>See also:</i>
	<b>C.3</b> Identify complementary, supplementary, vertical, adjacent, and congruent angles >>
	<b>C.8</b> Proofs involving angles >>
<b>Topic C:</b> Transformations/Rigid Motions	<b>D.3</b> Transversals: name angle pairs >>
	<b>D.6</b> Proofs involving parallel lines I >>
	<b>D.7</b> Proofs involving parallel lines II >>
	<b>L.7</b> Rotate polygons about a point >>
	<b>O.3</b> Draw lines of symmetry >>
	<b>O.4</b> Count lines of symmetry >>
	<i>See also:</i>
	<b>L.1</b> Classify congruence transformations >>
	<b>L.2</b> Translations: graph the image >>

**Topic D: Congruence**

- K.1**     SSS and SAS Theorems >>
- K.2**     Proving triangles congruent by SSS and SAS >>
- K.3**     ASA and AAS Theorems >>
- K.4**     Proving triangles congruent by ASA and AAS >>
- K.7**     Proving triangles congruent by SSS, SAS, ASA, and AAS >>
- K.8**     Proofs involving corresponding parts of congruent triangles >>
- K.10**    Proofs involving isosceles triangles >>

*See also:*

- J.1**     Congruence statements and corresponding parts >>
- K.5**     SSS, SAS, ASA, and AAS Theorems >>

**Topic E: Proving Properties of Geometric Figures**

- N.11**    Proofs involving quadrilaterals I >>
- N.12**    Proofs involving quadrilaterals II >>

**Topic F: Advanced Constructions**
**Topic G: Axiomatic Systems**

- C.4**     Find measures of complementary, supplementary, vertical, and adjacent angles >>
- D.4**     Transversals of parallel lines: find angle measures >>
- F.2**     Triangle Angle-Sum Theorem >>
- F.3**     Exterior Angle Theorem >>
- K.2**     Proving triangles congruent by SSS and SAS >>
- K.4**     Proving triangles congruent by ASA and AAS >>
- K.7**     Proving triangles congruent by SSS, SAS, ASA, and AAS >>
- K.8**     Proofs involving corresponding parts of congruent triangles >>
- K.9**     Congruency in isosceles and equilateral triangles >>
- K.10**    Proofs involving isosceles triangles >>
- N.4**     Properties of parallelograms >>

*See also:*

- C.5**     Angle bisectors >>

# Module 2

## Similarity, Proof, and Trigonometry

Textbook section	IXL skills
<b>Topic A:</b> Scale Drawings	<b>P.10</b> Triangle Proportionality Theorem >>
<b>Topic B:</b> Dilations	<b>L.3</b> Translations: find the coordinates >> <b>L.4</b> Translations: write the rule >> <b>L.6</b> Reflections: find the coordinates >> <b>L.9</b> Rotations: find the coordinates >>
<b>Topic C:</b> Similarity and Dilations	<b>P.5</b> Similar triangles and indirect measurement >> <b>P.7</b> Similarity rules for triangles >> <b>P.12</b> Prove similarity statements >> <i>See also:</i> <b>P.1</b> Similarity ratios >> <b>P.2</b> Similarity statements >>
<b>Topic D:</b> Applying Similarity to Right Triangles	<b>P.15</b> Prove the Pythagorean theorem >> <b>Q.1</b> Pythagorean Theorem >> <b>Q.4</b> Special right triangles >>
<b>Topic E:</b> Trigonometry	<b>R.1</b> Trigonometric ratios: sin, cos, and tan >> <b>R.8</b> Trigonometric ratios: find a side length >> <b>R.9</b> Trigonometric ratios: find an angle measure >> <b>R.10</b> Solve a right triangle >> <b>R.11</b> Law of Sines >> <b>R.12</b> Law of Cosines >> <i>See also:</i> <b>R.6</b> Find trigonometric functions using a calculator >>

# Module 3

## Similarity, Proof, and Trigonometry

Textbook section	IXL skills
<b>Topic D:</b> Applying Similarity to Right Triangles	<b>Q.2</b> <a href="#">Converse of the Pythagorean theorem &gt;&gt;</a>
<b>Topic A:</b> Area	<b>P.11</b> <a href="#">Areas of similar figures &gt;&gt;</a> <b>S.8</b> <a href="#">Area of compound figures &gt;&gt;</a> <b>S.9</b> <a href="#">Area between two shapes &gt;&gt;</a>  <i>See also:</i> <b>S.7</b> <a href="#">Area and circumference of circles &gt;&gt;</a> <b>S.10</b> <a href="#">Area and perimeter of similar figures &gt;&gt;</a>
<b>Topic B:</b> Volume	<b>D.1</b> <a href="#">Identify parallel, perpendicular, and skew lines and planes &gt;&gt;</a> <b>H.4</b> <a href="#">Cross-sections of three-dimensional figures &gt;&gt;</a> <b>H.5</b> <a href="#">Solids of revolution &gt;&gt;</a> <b>T.5</b> <a href="#">Volume of pyramids and cones &gt;&gt;</a> <b>T.6</b> <a href="#">Surface area and volume of spheres &gt;&gt;</a>  <i>See also:</i> <b>T.4</b> <a href="#">Volume of prisms and cylinders &gt;&gt;</a>

# Module 4

## Connecting Algebra and Geometry Through Coordinates

Textbook section	IXL skills	
<b>Topic A:</b> Rectangular and Triangular Regions Defined by Inequalities		
<b>Topic B:</b> Perpendicular and Parallel Lines in the Cartesian Plane	<b>E.5</b>	Slopes of parallel and perpendicular lines >>
	<b>E.6</b>	Equations of parallel and perpendicular lines >>
<b>Topic C:</b> Perimeters and Areas of Polygonal Regions in the Cartesian Plane	<b>S.5</b>	Area and perimeter in the coordinate plane I >>
	<b>S.6</b>	Area and perimeter in the coordinate plane II >>
<b>Topic D:</b> Partitioning and Extending Segments and Parameterization of Lines	<b>B.7</b>	Midpoint formula - find the midpoint >>
	<b>B.9</b>	Distance formula >>
	<b>E.7</b>	Find the distance between a point and a line >>

# Module 5

## Circles With and Without Coordinates

Textbook section	IXL skills	
Topic A: Central and Inscribed Angles		
Topic B: Arcs and Sectors	U.3	Arc measure and arc length >>
	U.4	Area of sectors >>
	U.9	Inscribed angles >>
Topic C: Secants and Tangents	U.7	Tangent lines >>
	U.13	Construct a tangent line to a circle >>
Topic D: Equations for Circles and Their Tangents	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.7	Graph circles from equations in standard form >>
Topic E: Cyclic Quadrilaterals and Ptolemy's Theorem		