



IXL Skill Alignment

Geometry alignment for Glencoe High School Math



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Chapter 0

Preparing for Geometry

Textbook section	IXL skills
0.1: Changing Units of Measure Within Systems	<ol style="list-style-type: none">1. Convert rates and measurements: customary units LSC2. Convert rates and measurements: metric units XZD
0.2: Changing Units of Measure Between Systems	
0.3: Simple Probability	<ol style="list-style-type: none">1. Theoretical and experimental probability 2L5
0.4: Algebraic Expressions	
0.5: Linear Equations	<ol style="list-style-type: none">1. Solve linear equations PHF
0.6: Linear Inequalities	<ol style="list-style-type: none">1. Solve linear inequalities 9MX
0.7: Ordered Pairs	<ol style="list-style-type: none">1. Coordinate plane review ZMF
0.8: Systems of Linear Equations	<ol style="list-style-type: none">1. Solve systems of linear equations 76G
0.9: Square Roots and Simplifying Radicals	<ol style="list-style-type: none">1. Simplify radical expressions SC5

Chapter 1

Tools of Geometry

Textbook section	IXL skills
1.1: Points, Lines, and Planes	
1.2: Line Segments and Distance	<ol style="list-style-type: none"> 1. Lengths of segments on number lines JSD 2. Additive property of length 7RA 3. Congruent line segments 6W6 4. Distance formula 59F
1.3: Locating Points and Midpoints	<ol style="list-style-type: none"> 1. Midpoints 7RH 2. Midpoint formula: find the midpoint 2YG
1.4: Angle Measure	<ol style="list-style-type: none"> 1. Lines, line segments, and rays XFC 2. Angle vocabulary 9U2 3. Angle measures BCQ 4. Construct an angle bisector FHL 5. Construct a congruent angle F7V
1.5: Angle Relationships	<ol style="list-style-type: none"> 1. Identify complementary, supplementary, vertical, adjacent, and congruent angles 7P7 2. Find measures of complementary, supplementary, vertical, and adjacent angles VZU 3. Construct a perpendicular line BZR
1.6: Two-Dimensional Figures	<ol style="list-style-type: none"> 1. Polygon vocabulary KHQ 2. Perimeter MGB 3. Area of rectangles and squares SUA 4. Area and perimeter in the coordinate plane I QWZ 5. Area and perimeter in the coordinate plane II MHQ 6. Area and circumference of circles ZDX

1.7: Transformations in the Plane

1. Classify congruence transformations CXT
2. Translations: find the coordinates F8U
3. Translations: write the rule 9PR
4. Reflections: find the coordinates SVY
5. Rotations: find the coordinates ZX5

1.8: Three-Dimensional Figures

1. Parts of three-dimensional figures VW9
2. Three-dimensional figure vocabulary NKH
3. Surface area and volume of rectangular prisms 7JB
4. Surface area of prisms and cylinders SWV
5. Surface area of pyramids and cones 8WX
6. Volume of prisms and cylinders N5F
7. Volume of pyramids and cones 7J3
8. Volume of spheres 62N

1.9: Two-Dimensional Representations of Three-Dimensional Figures

1. Nets and drawings of three-dimensional figures PKE

1.1: Precision and Accuracy

1. Precision M5E
2. Greatest possible error FLJ

Chapter 2

Logical Arguments and Line Relationships

Textbook section	IXL skills
2.1: Conjectures and Counterexamples	1. Counterexamples 2GJ
2.2: Statements, Conditionals, and Biconditionals	1. Identify hypotheses and conclusions 7FW 2. Conditionals VU9 3. Negations VBY 4. Converses, inverses, and contrapositives N5P 5. Biconditionals Q6E 6. Truth values JUU
2.3: Deductive Reasoning	
2.4: Writing Proofs	
2.5: Proving Segment Relationships	
2.6: Proving Angle Relationships	1. Proofs involving angles HV9
2.7: Parallel Lines and Transversals	1. Identify parallel, intersecting, and skew lines and planes QZD 2. Transversals: name angle pairs V85 3. Transversals of parallel lines: find angle measures WB9
2.8: Slope and Equations of Lines	1. Slopes of lines V2T 2. Graph a linear equation VUT 3. Equations of lines Q98 4. Slopes of parallel and perpendicular lines 6K2 5. Equations of parallel and perpendicular lines VEB
2.9: Proving Lines Parallel	1. Proofs involving parallel lines I CUV 2. Proofs involving parallel lines II 5U8



2.1: Perpendiculars and Distance

1. Find the distance between a point and a line GWC
 2. Find the distance between two parallel lines A7B
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Chapter 3

Rigid Transformations and Symmetry

Textbook section	IXL skills
3.1: Reflections	1. Reflections: graph the image SM9
3.2: Translations	1. Translations: graph the image 7AC
3.3: Rotations	1. Rotate polygons about a point XM7 2. Rotations: graph the image 6SD
3.4: Compositions of Transformations	1. Sequences of congruence transformations: graph the image WHW 2. Congruence transformations: mixed review XQ7
3.5: Symmetry	1. Line symmetry WBX 2. Rotational symmetry ERP 3. Draw lines of symmetry JU7 4. Count lines of symmetry M7U

Chapter 4

Triangles and Congruence

Textbook section	IXL skills
4.1: Angles of Triangles	<ol style="list-style-type: none">Triangle Angle-Sum Theorem UBUExterior Angle Theorem TGK
4.2: Congruent Triangles	<ol style="list-style-type: none">Congruence statements and corresponding parts CYLSolve problems involving corresponding parts WYB
4.3: Proving Triangles Congruent - SSS, SAS	<ol style="list-style-type: none">SSS and SAS Theorems 48QProving triangles congruent by SSS and SAS VVZSSS Theorem in the coordinate plane C5G
4.4: Proving Triangles Congruent - ASA, AAS	<ol style="list-style-type: none">ASA and AAS Theorems N94Proving triangles congruent by ASA and AAS 23ZSSS, SAS, ASA, and AAS Theorems LERProving triangles congruent by SSS, SAS, ASA, and AAS SZLProofs involving corresponding parts of congruent triangles AKL
4.5: Proving Right Triangles Congruent	<ol style="list-style-type: none">Hypotenuse-Leg Theorem VQJ
4.6: Isosceles and Equilateral Triangles	<ol style="list-style-type: none">Congruency in isosceles and equilateral triangles HPRProofs involving isosceles triangles V45
4.7: Triangles and Coordinate Proof	

Chapter 5

Relationships in Triangles

Textbook section	IXL skills
5.1: Bisectors of Triangles	<ol style="list-style-type: none">1. Perpendicular Bisector Theorem BKS2. Angle bisectors 68E3. Triangles and bisectors GWE
5.2: Medians and Altitudes of Triangles	<ol style="list-style-type: none">1. Identify medians, altitudes, angle bisectors, and perpendicular bisectors JWN
5.3: Inequalities in One Triangle	<ol style="list-style-type: none">1. Exterior Angle Inequality YQA2. Angle-side relationships in triangles ZN8
5.4: Indirect Proof	
5.5: The Triangle Inequality	<ol style="list-style-type: none">1. Triangle Inequality Theorem BW7
5.6: Inequalities in Two Triangles	

Chapter 6

Quadrilaterals

Textbook section	IXL skills
6.1: Angles of Polygons	<ol style="list-style-type: none">1. Interior angles of polygons SZF2. Exterior angles of polygons MQ73. Review: interior and exterior angles of polygons 6VG
6.2: Parallelograms	<ol style="list-style-type: none">1. Properties of parallelograms LLK2. Proving a quadrilateral is a parallelogram H89
6.3: Tests for Parallelograms	
6.4: Special Parallelograms: Rectangles	
6.5: Special Parallelograms: Rhombi, Squares	<ol style="list-style-type: none">1. Properties of rhombuses QVX2. Properties of squares and rectangles R9M
6.6: Trapezoids and Kites	<ol style="list-style-type: none">1. Properties of trapezoids UC92. Properties of kites LZ93. Review: properties of quadrilaterals Q2R

Chapter 7

Similarity

Textbook section	IXL skills
7.1: Dilations	<ol style="list-style-type: none">1. Dilations: graph the image ZRD2. Dilations: find the coordinates 5KZ3. Dilations: scale factor and classification ZDM
7.2: Similar Polygons	<ol style="list-style-type: none">1. Similarity ratios BT72. Similarity statements UG83. Identify similar figures 85X4. Side lengths and angle measures in similar figures E2K5. Perimeters of similar figures 9T8
7.3: Similar Triangles: AA Similarity	
7.4: Similar Triangles: SSS and SAS Similarity	<ol style="list-style-type: none">1. Similar triangles and indirect measurement JWK2. Similarity rules for triangles XJQ3. Similar triangles and similarity transformations G2Z
7.5: Parallel Lines and Proportional Parts	<ol style="list-style-type: none">1. Midsegments of triangles 8GT2. Triangle Proportionality Theorem 6WA3. Prove similarity statements ETX4. Prove proportions or angle congruences using similarity DDY
7.6: Parts of Similar Triangles	

Chapter 8

Right Triangles and Trigonometry

Textbook section	IXL skills
8.1: Geometric Mean	1. Proofs involving similarity in right triangles XCT
8.2: The Pythagorean Theorem and Its Converse	1. Pythagorean theorem F55 2. Converse of the Pythagorean theorem NCK 3. Pythagorean Inequality Theorems PZ7
8.3: Special Right Triangles	1. Special right triangles LDM
8.4: Trigonometry	1. Trigonometric ratios: sin, cos, and tan D5Z 2. Trigonometric ratios: find a side length UZC 3. Trigonometric ratios: find an angle measure 49E 4. Solve a right triangle GPR
8.5: Angles of Elevation and Depression	
8.6: The Law of Sines	1. Law of Sines ZEL
8.7: The Law of Cosines	1. Law of Cosines 24X 2. Solve a triangle REQ

Chapter 9

Circles

Textbook section	IXL skills
9.1: Circles and Circumference	
9.2: Measuring Angles and Arcs	<ol style="list-style-type: none">1. Central angles and arc measures VZX2. Arc length 7L9
9.3: Arcs and Chords	<ol style="list-style-type: none">1. Arcs and chords P63
9.4: Inscribed Angles	<ol style="list-style-type: none">1. Inscribed angles 98U2. Angles in inscribed right triangles 6DL3. Angles in inscribed quadrilaterals I 24Y
9.5: Tangents	<ol style="list-style-type: none">1. Tangent lines CFV2. Perimeter of polygons with an inscribed circle UJT3. Construct a tangent line to a circle JSH
9.6: Secants, Tangents, and Angle Measures	
9.7: Equations of Circles	<ol style="list-style-type: none">1. Write equations of circles in standard form from graphs 8HJ2. Write equations of circles in standard form using properties EXA3. Convert equations of circles from general to standard form YM54. Graph circles from equations in standard form GVH5. Graph circles from equations in general form 2AU
9.8: Equations of Parabolas	

Chapter 10

Extending Area

Textbook section	IXL skills
10.1: Areas of Parallelograms and Triangles	1. Area of parallelograms and triangles JTR
10.2: Areas of Trapezoids, Rhombi, and Kites	1. Area of trapezoids MP6
10.3: Areas of Circles and Sectors	1. Area of sectors XZQ
10.4: Areas of Regular Polygons and Composite Figures	1. Area of compound figures KHG 2. Area between two shapes SB6
10.5: Area and Nonrigid Transformations	1. Area and perimeter of similar figures 6J7
10.6: Surface Area	1. Surface area of prisms and cylinders SWV 2. Surface area of pyramids and cones 8WX

Chapter 11

Extending Volume

Textbook section	IXL skills
11.1: Cross Sections and Solids of Revolution	<ol style="list-style-type: none">1. Cross sections of three-dimensional figures 7Z42. Solids of revolution LKT
11.2: Volumes of Prisms and Cylinders	<ol style="list-style-type: none">1. Volume of prisms and cylinders N5F
11.3: Volumes of Pyramids and Cones	<ol style="list-style-type: none">1. Volume of pyramids and cones 7J3
11.4: Spheres	<ol style="list-style-type: none">1. Volume of spheres 62N
11.5: Spherical Geometry	
11.6: Volume and Nonrigid Transformations	<ol style="list-style-type: none">1. Similar solids: find the missing length UT72. Surface area and volume of similar solids N9X
11.7: Applying Measurements	

Chapter 12

Probability

Textbook section	IXL skills
12.1: Representing Sample Spaces	1. Counting principle NMP
12.2: Probability and Counting	1. Theoretical and experimental probability 2L5
12.3: Probability with Permutations and Combinations	1. Permutations 2A8 2. Permutation and combination notation YXM
12.4: Geometric Probability	1. Geometric probability KBK
12.5: Probability and the Multiplication Rule	1. Identify independent and dependent events GW9
12.6: Probability and the Addition Rule	1. Outcomes of compound events 82S
12.7: Conditional Probability	
12.8: Two-Way Frequency Tables	