



IXL Skill Alignment

7th grade alignment for Connected Mathematics 3



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Shapes and Designs

Two-Dimensional Geometry

Topic 1: The Family of Polygons

Textbook section	IXL skills
Lesson 1.1: Sorting and Sketching Polygons	1. Identify and classify polygons XPS
Lesson 1.2: In A Spin	
Lesson 1.3: Estimating Measures of Rotations and Angles	
Lesson 1.4: Measuring Angles	1. Name, measure, and classify angles 2UG
Lesson 1.5: Design Challenge I	

Topic 2: Designing Polygons: The Angle Connection

Textbook section	IXL skills
Lesson 2.1: Angle Sums of Regular Polygons	
Lesson 2.2: Angle Sums of Any Polygon	1. Interior angles of polygons XE8 2. Find missing angles in triangles 4U6 3. Find missing angles in quadrilaterals I CXP
Lesson 2.3: The Bees Do It	
Lesson 2.4: The Ins and Outs of Polygons	

Topic 3: Designing Triangles and Quadrilaterals

Textbook section	IXL skills
Lesson 3.1: Building Triangles	
Lesson 3.2: Design Challenge II	
Lesson 3.3: Building Quadrilaterals	1. Graph triangles and quadrilaterals MEZ

Lesson 3.4: Parallel Lines and Transversals

1. Identify complementary, supplementary, vertical, and adjacent angles HKG
2. Find measures of complementary, supplementary, vertical, and adjacent angles CST
3. Transversals of parallel lines: find angle measures CG9

Lesson 3.5: Design Challenge III

1. Line symmetry TMU

Accentuate the Negative

Integers and Rational Numbers

Topic 1: Extending the Number System

Textbook section	IXL skills
Lesson 1.1: Playing Math Fever	
Lesson 1.2: Extending the Number Line	1. Integers on number lines A5Y 2. Graph inequalities on number lines VLU 3. Write inequalities from number lines JNL
Lesson 1.3: From Sauna to Snowbank	1. Graph integers on horizontal and vertical number lines EM8 2. Add and subtract integers FNS
Lesson 1.4: In the Chips	1. Add and subtract integers using counters B8X

Topic 2: Adding and Subtracting Rational Numbers

Textbook section	IXL skills
Lesson 2.1: Extending Addition to Rational Numbers	
Lesson 2.2: Extending Subtraction to Rational Numbers	1. Apply addition and subtraction rules Y8T 2. Absolute value of rational numbers JCX 3. Add and subtract rational numbers GKU
Lesson 2.3: The "+/-" Connection	
Lesson 2.4: Fact Families	

Topic 3: Multiplying and Dividing Rational Numbers

Textbook section	IXL skills
Lesson 3.1: Multiplication Patterns with Integers	<ol style="list-style-type: none"> 1. Integer multiplication and division rules 5R8 2. Multiply and divide integers R8D
Lesson 3.2: Multiplication of Rational Numbers	<ol style="list-style-type: none"> 1. Multiply and divide rational numbers BXW
Lesson 3.3: Division of Rational Numbers	<ol style="list-style-type: none"> 1. Integer multiplication and division rules 5R8 2. Multiply and divide integers R8D 3. Complete multiplication and division equations with integers K94 4. Multiply and divide rational numbers BXW
Lesson 3.4: Playing the Integer Product Game	

Topic 4: Properties of Operations

Textbook section	IXL skills
Lesson 4.1: Order of Operations	<ol style="list-style-type: none"> 1. Evaluate numerical expressions involving integers 7YN 2. Evaluate numerical expressions involving exponents D7P 3. Evaluate numerical expressions involving fractions XXQ 4. Evaluate numerical expressions involving decimals FNM
Lesson 4.2: The Distributive Property	<ol style="list-style-type: none"> 1. Multiply using the distributive property NUY
Lesson 4.3: What Operations are Needed?	<ol style="list-style-type: none"> 1. Multi-step word problems JVU

Stretching and Shrinking

Understanding Similarity

Topic 1: Enlarging and Reducing Shapes

Textbook section	IXL skills
Lesson 1.1: Solving a Mystery	
Lesson 1.2: Scaling Up and Down	

Topic 2: Similar Figures

Textbook section	IXL skills
Lesson 2.1: Drawing Wumps	
Lesson 2.2: Hats Off to the Wumps	1. Similar and congruent figures DVS
Lesson 2.3: Mouthing Off and Nosing Around	1. Dilations: scale factor and classification 8NK

Topic 3: Scaling Perimeter and Area

Textbook section	IXL skills
Lesson 3.1: Rep-Tile Quadrilaterals	1. Dilations: scale factor and classification 8NK
Lesson 3.2: Rep-Tile Triangles	1. Dilations: scale factor and classification 8NK
Lesson 3.3: Designing Under Constraints	
Lesson 3.4: Out of Reach	1. Side lengths and angle measures of similar figures JA5

Topic 4: Similarity and Ratios

Textbook section	IXL skills
Lesson 4.1: Ratios Within Similar Parallelograms	<ol style="list-style-type: none">1. Identify equivalent ratios ZFM2. Equivalent ratios: word problems DJ8
Lesson 4.2: Ratios Within Similar Triangles	<ol style="list-style-type: none">1. Dilations: scale factor and classification 8NK
Lesson 4.3: Finding Missing Parts	<ol style="list-style-type: none">1. Side lengths and angle measures of similar figures JA5
Lesson 4.4: Using Shadows to Find Heights	<ol style="list-style-type: none">1. Scale drawings: word problems 84H2. Similar figures and indirect measurement 8VJ

Comparing and Scaling

Ratios, Rates, Percents, and Proportions

Topic 1: Ways of Comparing: Ratios and Proportions

Textbook section	IXL skills
Lesson 1.1: Surveying Opinions	
Lesson 1.2: Mixing Juice	1. Word problems involving ratios JKY
Lesson 1.3: Time to Concentrate	1. Equivalent ratios: word problems DJ8
Lesson 1.4: Keeping Things in Proportion	1. Solve proportions TDA 2. Solve proportions: word problems WB7

Topic 2: Comparing and Scaling Rates

Textbook section	IXL skills
Lesson 2.1: Sharing Pizza	
Lesson 2.2: Comparing Pizza Prices	1. Write equations for proportional relationships from tables 6GU
Lesson 2.3: Finding Costs	1. Find the constant of proportionality from a table LKZ 2. Unit rates 2NB 3. Interpret graphs of proportional relationships RMH 4. Find the constant of proportionality from a graph ZUT

Topic 3: Markups, Markdowns, and Measures: Using Ratios, Percents, and Proportions

Textbook section	IXL skills
Lesson 3.1: Commissions, Markups, and Discounts	1. Percent of a number: tax, discount, and more SPN 2. Multi-step problems with percents ZHX

Lesson 3.2: Measuring to the Unit

1. Compare and convert customary units 4B8
 2. Compare and convert metric units HW2
 3. Convert between customary and metric systems E8Z
 4. Solve proportions: word problems WB7
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Lesson 3.3: Mixing it Up

1. Write and solve equations for proportional relationships VKK
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Moving Straight Ahead

Linear Relationships

Topic 1: Walking Rates

Textbook section	IXL skills
Lesson 1.1: Walking Marathons	
Lesson 1.2: Walking Rates and Linear Relationships	1. Identify proportional relationships by graphing AAN
Lesson 1.3: Raising Money	1. Constant rate of change TWW 2. Identify independent and dependent variables LK9
Lesson 1.4: Using the Walkathon Money	1. Write an equation from a graph using a table MXS 2. Identify the graph of an equation WU5 3. Interpret a graph: word problems 2V5 4. Write a two-variable equation 94Q

Topic 2: Exploring Linear Relationships with Graphs and Tables

Textbook section	IXL skills
Lesson 2.1: Henri and Emile's Race	
Lesson 2.2: Crossing the Line	1. Identify the graph of an equation WU5
Lesson 2.3: Comparing Costs	1. Write a linear function 78T 2. Does (x, y) satisfy the equation? JW9 3. Solve word problems involving two-variable equations YJT
Lesson 2.4: Connecting Tables, Graphs, and Equations	1. Complete a table for a two-variable relationship 2LU 2. Find a value using two-variable equations KSY

Topic 3: Solving Equations

Textbook section	IXL skills
Lesson 3.1: Solving Equations Using Tables and Graphs	
Lesson 3.2: Mystery Pouches in the Kingdom of Montarek	
Lesson 3.3: From Pouches to Variables	
Lesson 3.4: Solving Linear Equations	<ol style="list-style-type: none"> 1. Solve equations using properties XSC 2. Write equivalent expressions using properties 6XR
Lesson 3.5: Finding the Point of Intersection	

Topic 4: Exploring Slope: Connecting Rates and Ratios

Textbook section	IXL skills
Lesson 4.1: Climbing Stairs	
Lesson 4.2: Finding the Slope of a Line	<ol style="list-style-type: none"> 1. Find the slope from a graph YH9 2. Find the slope from two points VZG 3. Graph a line using slope CHR
Lesson 4.3: Exploring Patterns with Lines	<ol style="list-style-type: none"> 1. Find the slope from an equation HPT 2. Complete a table for a two-variable relationship 2LU
Lesson 4.4: Pulling it All Together	<ol style="list-style-type: none"> 1. Graph a two-variable equation DQE

What Do You Expect?

Probability and Expected Value

Topic 1: A First Look at Chance

Textbook section	IXL skills
Lesson 1.1: Choosing Cereal	
Lesson 1.2: Tossing Paper Cups	
Lesson 1.3: One More Try	1. Experimental probability 9AA
Lesson 1.4: Analyzing Events	

Topic 2: Experimental and Theoretical Probability

Textbook section	IXL skills
Lesson 2.1: Predicting to Win	1. Probability of simple events ZZB
Lesson 2.2: Choosing Marbles	
Lesson 2.3: Designing a Fair Game	
Lesson 2.4: Winning the Bonus Prize	1. Compound events: find the number of outcomes HZR 2. Make predictions using theoretical probability 9UW

Topic 3: Making Decisions with Probability

Textbook section	IXL skills
Lesson 3.1: Designing a Spinner to Find Probabilities	
Lesson 3.2: Making Decisions	
Lesson 3.3: Roller Derby	

Lesson 3.4: Scratching Spots**Topic 4: Analyzing Compound Events Using an Area Model****Textbook section****IXL skills****Lesson 4.1:** Drawing Area Models to Find the Sample Space**Lesson 4.2:** Making Purple**Lesson 4.3:** One-and-One Free Throws**Lesson 4.4:** Finding Expected Value

1. Make predictions using theoretical probability 9UW

Topic 5: Binomial Outcomes**Textbook section****IXL skills****Lesson 5.1:** Guessing Answers**Lesson 5.2:** Ortonville**Lesson 5.3:** A Baseball Series

Filling and Wrapping

Three-Dimensional Measurement

Topic 1: Building Smart Boxes: Rectangular Prisms

Textbook section	IXL skills
Lesson 1.1: How Big Are Those Boxes?	
Lesson 1.2: Optimal Containers I	
Lesson 1.3: Optimal Containers II	
Lesson 1.4: Compost Containers	1. Volume of cubes and rectangular prisms XHF 2. Surface area of cubes and rectangular prisms RMG

Topic 2: Polygonal Prisms

Textbook section	IXL skills
Lesson 2.1: Folding Paper	1. Surface area of cubes and prisms RFP
Lesson 2.2: Packing a Prism	1. Volume of cubes and prisms URT
Lesson 2.3: Slicing Prisms and Pyramids	1. Cross sections of three-dimensional figures HFJ 2. Nets of three-dimensional figures 3R2

Topic 3: Area and Circumference of Circles

Textbook section	IXL skills
Lesson 3.1: Going Around in Circles	1. Parts of a circle 2VL
Lesson 3.2: Pricing Pizza	
Lesson 3.3: Squaring a Circle to Find its Area	
Lesson 3.4: Connecting Circumference and Area	1. Area of circles YA8 2. Circumference of circles KS7 3. Circles: word problems P56

Topic 4: Cylinders, Cones, and Spheres

Textbook section	IXL skills
Lesson 4.1: Networking	1. Surface area of cylinders FGU
Lesson 4.2: Wrapping Paper	1. Volume of cylinders 9F3 2. Perimeter and area: changes in scale ZC6
Lesson 4.3: Comparing Juice Containers	
Lesson 4.4: Filling Cones and Spheres	1. Volume of cones YXR 2. Volume of spheres QX7
Lesson 4.5: Comparing Volumes of Spheres, Cylinders, and Cones	1. Volume of cubes, prisms, and pyramids JUB