



IXL Skill Alignment

8th grade alignment for Connected Mathematics 3



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Thinking with Mathematical Models

Linear and Inverse Variation

Topic 1: Exploring Data Patterns

Textbook section	IXL skills
Lesson 1.1: Bridge Thickness and Strength	
Lesson 1.2: Bridge Length and Strength	
Lesson 1.3: Custom Construction Parts	

Topic 2: Linear Models and Equations

Textbook section	IXL skills
Lesson 2.1: Modeling Linear Data Patterns	<ol style="list-style-type: none"> 1. Complete a table for a linear function D9B 2. Complete a table and graph a linear function DC2
Lesson 2.2: Up and Down the Staircase	<ol style="list-style-type: none"> 1. Write a linear equation from a slope and y-intercept WHP 2. Write a linear equation from a graph WHM 3. Find the slope of a graph D7M 4. Find the slope from two points ZAC
Lesson 2.3: Tree Top Fun	<ol style="list-style-type: none"> 1. Write a linear function from a table UYY 2. Identify independent and dependent variables FSF 3. Write a linear equation from a slope and a point VKP 4. Write a linear equation from two points 2R9
Lesson 2.4: Boat Rental Business	<ol style="list-style-type: none"> 1. Write linear functions: word problems YK6 2. Solve two-step equations JXD 3. Solve multi-step equations 55K 4. Solve equations: mixed review HZZ 5. Interpret points on the graph of a linear function 9E8

- Solve one-step and two-step equations: word problems HCP

Lesson 2.5: Amusement Park or Movies

Topic 3: Inverse Variation

Textbook section	IXL skills
Lesson 3.1: Rectangles With Fixed Area	1. Complete a table and graph a linear function DC2
Lesson 3.2: Distance, Speed, and Time	
Lesson 3.3: Planning a Field Trip	1. Graph a line from an equation in slope-intercept form W5E
Lesson 3.4: Modeling Data Patterns	

Topic 4: Variability and Associations in Numerical Data

Textbook section	IXL skills
Lesson 4.1: Vitruvian Man	
Lesson 4.2: Older and Faster	1. Identify trends with scatter plots GZE 2. Scatter plots: line of best fit ZQ6
Lesson 4.3: Correlation Coefficients and Outliers	1. Outliers in scatter plots RP8
Lesson 4.4: Measuring Variability	1. Interpret line plots RL8 2. Create line plots 8GS

Topic 5: Variability and Associations in Categorical Data

Textbook section	IXL skills
Lesson 5.1: Wood or Steel? That's the Question	
Lesson 5.2: Politics of Girls and Boys	
Lesson 5.3: After-School Jobs and Homework	

Looking for Pythagoras

The Pythagorean Theorem

Topic 1: Coordinate Grids

Textbook section	IXL skills
Lesson 1.1: Driving Around Euclid	<ol style="list-style-type: none"> 1. Coordinate plane review T6E 2. Follow directions on a coordinate plane 2HR
Lesson 1.2: Planning Parks	
Lesson 1.3: Finding Area	

Topic 2: Squaring Off

Textbook section	IXL skills
Lesson 2.1: Looking for Squares	
Lesson 2.2: Square Roots	<ol style="list-style-type: none"> 1. Square roots of perfect squares 9RS 2. Positive and negative square roots 8TF 3. Estimate positive and negative square roots 96T 4. Solve equations using square roots NNA
Lesson 2.3: Using Squares to Find Lengths	
Lesson 2.4: Cube Roots	<ol style="list-style-type: none"> 1. Cube roots of positive perfect cubes RYG 2. Solve equations using cube roots TQ5 3. Estimate cube roots RLC

Topic 3: The Pythagorean Theorem

Textbook section	IXL skills
Lesson 3.1: Discovering the Pythagorean Theorem	
Lesson 3.2: A Proof of the Pythagorean Theorem	
Lesson 3.3: Finding Distances	<ol style="list-style-type: none"> 1. Find the distance between two points ZBP

Lesson 3.4: Measuring the Egyptian Way

1. Converse of the Pythagorean theorem: is it a right triangle? EQZ

Topic 4: Using the Pythagorean Theorem: Understanding Real Numbers**Textbook section****IXL skills****Lesson 4.1:** Analyzing the Wheel of Theodorus**Lesson 4.3:** Representing Decimals as Fractions

1. Convert between decimals and fractions or mixed numbers 2RC

Lesson 4.4: Getting Real

1. Identify rational and irrational numbers NV6

Topic 5: Using the Pythagorean Theorem: Analyzing Triangles and Circles**Textbook section****IXL skills****Lesson 5.1:** Stopping Sneaky Sally

1. Pythagorean theorem: find the length of the hypotenuse 7ZL

Lesson 5.2: Analyzing Triangles

1. Pythagorean theorem: find the missing leg length Y9C
2. Pythagorean theorem: find the perimeter VGE

Lesson 5.3: Analyzing Circles

Growing, Growing, Growing

Exponential Functions

Topic 1: Exponential Growth

Textbook section	IXL skills
Lesson 1.1: Making Ballots	
Lesson 1.2: Requesting a Reward	<ol style="list-style-type: none"> 1. Understanding exponents VFV 2. Convert between standard and scientific notation H8A
Lesson 1.3: Making a New Offer	

Topic 2: Examining Growth Patterns

Textbook section	IXL skills
Lesson 2.1: Killer Plant Strikes Lake Victoria	
Lesson 2.2: Growing Mold	
Lesson 2.3: Studying Snake Populations	

Topic 3: Growth Factors and Growth Rates

Textbook section	IXL skills
Lesson 3.1: Reproducing Rabbits	
Lesson 3.2: Investing for the Future	
Lesson 3.3: Making a Difference	<ol style="list-style-type: none"> 1. Compound interest LSK

Topic 4: Exponential Decay

Textbook section	IXL skills
Lesson 4.1: Making Smaller Ballots	
Lesson 4.2: Fighting Fleas	
Lesson 4.3: Cooling Water	

Topic 5: Patterns with Exponents

Textbook section	IXL skills
Lesson 5.1: Looking for Patterns Among Exponents	<ol style="list-style-type: none"> Evaluate exponents EYR Solve equations with variable exponents LSA
Lesson 5.2: Rules of Exponents	<ol style="list-style-type: none"> Understanding negative exponents YBB Evaluate negative exponents WGS Multiplication with exponents EQY Division with exponents M2C Power rule AEQ Identify equivalent expressions involving exponents I VLM
Lesson 5.3: Extending the Rules of Exponents	<ol style="list-style-type: none"> Evaluate expressions using properties of exponents UTY
Lesson 5.4: Operations with Scientific Notation	<ol style="list-style-type: none"> Multiply numbers written in scientific notation YZU Divide numbers written in scientific notation SGT
Lesson 5.5: Revisiting Exponential Functions	

Butterflies, Pinwheels, and Wallpaper

Symmetry and Transformations

Topic 1: Symmetry and Transformations

Textbook section	IXL skills
Lesson 1.1: Butterfly Symmetry	
Lesson 1.2: In a Spin	1. Line symmetry F7Z
Lesson 1.3: Sliding Around	
Lesson 1.4: Properties of Transformations	1. Identify reflections, rotations, and translations UYL

Topic 2: Transformations and Congruence

Textbook section	IXL skills
Lesson 2.1: Connecting Congruent Polygons	1. Congruence statements and corresponding parts LPP
Lesson 2.2: Supporting the World	
Lesson 2.3: Minimum Measurement	

Topic 3: Transforming Coordinates

Textbook section	IXL skills
Lesson 3.1: Flipping on a Grid	1. Reflections: graph the image NBM 2. Reflections: find the coordinates KUX
Lesson 3.2: Sliding on a Grid	1. Translations: graph the image XUS 2. Translations: find the coordinates RUP
Lesson 3.3: Spinning on a Grid	1. Rotations: graph the image AC9 2. Rotations: find the coordinates HHS

Lesson 3.4: A Special Property of Translations and Half-Turns

Lesson 3.5: Parallel Lines, Transversals, and Angle Sums

1. Transversals of parallel lines: find angle measures V99
2. Find missing angles in triangles JFJ

Topic 4: Dilations and Similar Figures

Textbook section

IXL skills

Lesson 4.1: Focus on Dilations

1. Dilations: graph the image 9T4
2. Dilations: find the coordinates UV9

Lesson 4.2: Return of Super Sleuth

1. Similar and congruent figures U85

Lesson 4.3: Checking Similarity Without Transformations

Lesson 4.4: Using Similar Triangles

1. Side lengths and angle measures of similar figures 79Y

Say It With Symbols

Making Sense of Symbols

Topic 1: Making Sense of Symbols: Equivalent Expressions

Textbook section	IXL skills
Lesson 1.1: Tiling Pools	
Lesson 1.2: Thinking in Different Ways	1. Identify equivalent linear expressions II YP8
Lesson 1.3: The Community Pool Problem	1. Write variable expressions: two or three operations 6QT
Lesson 1.4: Diving In	1. Multiply using the distributive property U7T 2. Write equivalent expressions using properties QFJ 3. Add and subtract linear expressions QCY 4. Factors of linear expressions EGA

Topic 2: Combining Expressions

Textbook section	IXL skills
Lesson 2.1: Walking Together	
Lesson 2.2: Predicting Profit	
Lesson 2.3: Making Candles	1. Volume of cylinders 9F3 2. Volume of cones Y9R 3. Volume of spheres QX7
Lesson 2.4: Selling Ice Cream	

Topic 3: Solving Equations

Textbook section	IXL skills
Lesson 3.1: Selling Greeting Cards	<ol style="list-style-type: none">1. Properties of equality 7WL2. Solve equations: complete the solution PGH3. Solve multi-step equations 55K4. Solve equations involving like terms Q2B5. Solve equations with variables on both sides ZYL6. Solve equations: mixed review HZZ7. Solve one-step and two-step equations: word problems HCP8. Find the number of solutions XDE
Lesson 3.2: Comparing Costs	
Lesson 3.3: Factoring Quadratic Equations	
Lesson 3.4: Solving Quadratic Equations	

Topic 4: Looking Back at Functions

Textbook section	IXL skills
Lesson 4.1: Pumping Water	
Lesson 4.2: Area and Profit- What's the Connection?	
Lesson 4.3: Generating Patterns	
Lesson 4.4: What's the Function?	

Topic 5: Reasoning With Symbols

Textbook section	IXL skills
Lesson 5.1: Using Algebra to Solve a Puzzle	
Lesson 5.2: Odd and Even Revisited	<ol style="list-style-type: none">1. Apply addition and subtraction rules <small>GDU</small>2. Apply addition, subtraction, multiplication, and division rules <small>S6N</small>3. Divisibility rules <small>VW5</small>4. Classify numbers <small>VR7</small>
Lesson 5.3: Squaring Odd Numbers	

It's In the System

Systems of Linear Equations and Inequalities

Topic 1: Linear Equations with Two Variables

Textbook section	IXL skills
Lesson 1.1: Shirts and Caps	
Lesson 1.2: Connecting $Ax + By = C$ and $y = mx + b$	<ol style="list-style-type: none"> 1. Convert a linear equation in standard form to slope-intercept form NKM 2. Does (x, y) satisfy the linear function? 5BD
Lesson 1.3: Booster Club Members	<ol style="list-style-type: none"> 1. Solve a system of equations by graphing WV5 2. Solve a system of equations by graphing: word problems W9J

Topic 2: Solving Linear Systems Symbolically

Textbook section	IXL skills
Lesson 2.1: Shirts and Caps Again	<ol style="list-style-type: none"> 1. Solve a system of equations using substitution J8X 2. Solve a system of equations using substitution: word problems 9M8
Lesson 2.2: Taco Truck Lunch	
Lesson 2.3: Solving Systems by Combining Equations II	<ol style="list-style-type: none"> 1. Solve a system of equations using elimination ZQV 2. Solve a system of equations using elimination: word problems Z97

Topic 3: Systems of Functions and Inequalities

Textbook section	IXL skills
Lesson 3.1: Comparing Security Services	

Lesson 3.2: Solving Linear Inequalities
Symbolically

1. Solve two-step inequalities N9D
2. Graph solutions to two-step inequalities WHT
3. Solve multi-step inequalities 6AZ
4. Graph solutions to multi-step inequalities HKW

Lesson 3.3: Operating at a Profit

Topic 4: Systems of Linear Inequalities

Textbook section

IXL skills

Lesson 4.1: Limiting Driving Miles

Lesson 4.2: What Makes a Car Green?

Lesson 4.3: Feasible Points

Lesson 4.4: Miles of Emissions