



IXL Skill Alignment

6th grade alignment for Open Up Resources



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Unit 1

Area and Surface Area

Reasoning to Find Area

Textbook section	IXL skills
Lesson 1: Tiling the Plane	1. Create figures with a given area QYL
Lesson 2: Finding Area by Decomposing and Rearranging	1. Select two figures with the same area B6T
Lesson 3: Reasoning to Find Area	1. Area of compound figures 76U 2. Area between two rectangles EY6

Parallelograms

Textbook section	IXL skills
Lesson 4: Parallelograms	1. Identify parallelograms ND5 2. Understanding area of a parallelogram QMU
Lesson 5: Bases and Heights of Parallelograms	
Lesson 6: Area of Parallelograms	1. Area of parallelograms Y8K

Triangles

Textbook section	IXL skills
Lesson 7: From Parallelograms to Triangles	
Lesson 8: Areas of Triangles	1. Understanding area of a triangle PLL
Lesson 9: Formula for the Area of a Triangle	1. Area of triangles C8S <i>Also consider</i> • Area between two triangles 8RG
Lesson 10: Bases and Heights of Triangles	

Polygons

Textbook section	IXL skills
Lesson 11: Polygons	<ol style="list-style-type: none"> 1. Is it a polygon? WKC 2. Area of compound figures with triangles 5V2 <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Understanding area of a trapezoid 42R • Area of trapezoids PKW

Surface Area

Textbook section	IXL skills
Lesson 12: What is Surface Area?	<ol style="list-style-type: none"> 1. Surface area of rectangular prisms NHJ
Lesson 13: Polyhedra	<ol style="list-style-type: none"> 1. Identify polyhedra WWL 2. Count vertices, edges, and faces 8SF <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Which figure is being described? 9WV
Lesson 14: Nets and Surface Area	<ol style="list-style-type: none"> 1. Nets of three-dimensional figures 8KP
Lesson 15: More Nets, More Surface Area	<ol style="list-style-type: none"> 1. Surface area of prisms and pyramids PGA
Lesson 16: Distinguishing Between Surface Area and Volume (optional)	

Squares and Cubes

Textbook section	IXL skills
Lesson 17: Squares and Cubes	<ol style="list-style-type: none"> 1. Squares and cubes FWR
Lesson 18: Surface Area of a Cube	<ol style="list-style-type: none"> 1. Surface area of cubes 6CX

Let's Put it to Work

Textbook section

IXL skills

Lesson 19: Designing a Tent

Unit 2

Introducing Ratios

What are Ratios?

Textbook section	IXL skills
Lesson 1: Introducing Ratios and Ratio Language	1. Write a ratio 8ZZ
Lesson 2: Representing Ratios with Diagrams	1. Which model represents the ratio? W7S

Equivalent Ratios

Textbook section	IXL skills
Lesson 3: Recipes	
Lesson 4: Color Mixtures	
Lesson 5: Defining Equivalent Ratios	1. Identify equivalent ratios 2LM 2. Write an equivalent ratio NEA

Representing Equivalent Ratios

Textbook section	IXL skills
Lesson 6: Introducing Double Number Line Diagrams	1. Equivalent ratios: word problems RLZ
Lesson 7: Creating Double Number Line Diagrams	
Lesson 8: How Much for One?	1. Unit prices KG5 2. Unit prices with decimals CY5
Lesson 9: Constant Speed	
Lesson 10: Comparing Situations by Examining Ratios	1. Compare ratios: word problems 2HT

Solving Ratio and Rate Problems

Textbook section	IXL skills
Lesson 11: Representing Ratios with Tables	1. Ratio tables I RWG
Lesson 12: Navigating a Table of Equivalent Ratios	1. Ratio tables II MSS
Lesson 13: Tables and Double Number Line Diagrams	
Lesson 14: Solving Equivalent Ratio Problems	1. Ratios and rates: word problems ZB9

Part-Part-Whole Ratios

Textbook section	IXL skills
Lesson 15: Part-Part-Whole Ratios	1. Use tape diagrams to solve ratio word problems B2A
Lesson 16: Solving More Ratio Problems	

Let's Put it to Work

Textbook section	IXL skills
Lesson 17: A Fermi Problem	

Unit 3

Unit Rates and Percentages

Units of Measurement

Textbook section	IXL skills
Lesson 1: The Burj Khalifa	

Unit Conversion

Textbook section	IXL skills
Lesson 2: Anchoring Units of Measurement (optional)	<ol style="list-style-type: none"> 1. Estimate customary measurements H8P 2. Estimate metric measurements V6Y
Lesson 3: Measuring with Different-Sized Units	<ol style="list-style-type: none"> 1. Understanding cubic units 9BX
Lesson 4: Converting Units	<ol style="list-style-type: none"> 1. Convert metric and customary units using conversion factors AGN 2. Convert metric and customary units using tables 6U8 3. Convert between customary and metric systems 5CF <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Customary unit conversions involving fractions and mixed numbers UHE

Rates

Textbook section	IXL skills
Lesson 5: Comparing Speeds and Prices	<ol style="list-style-type: none"> 1. Which is the better buy? L8S
Lesson 6: Interpreting Rates	<ol style="list-style-type: none"> 1. Compare rates: word problems NAF
Lesson 7: Equivalent Ratios Have the Same Unit Rates	
Lesson 8: More About Constant Speed	<ol style="list-style-type: none"> 1. Constant speed: multi-step word problems FPC

Lesson 9: Solving Rate Problems

1. Unit prices with customary unit conversions TXP

Percentages

Textbook section	IXL skills
Lesson 10: What Are Percentages?	<ol style="list-style-type: none"> 1. What percentage is illustrated? RHG <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Understanding percents: strip models 5JV
Lesson 11: Percentages and Double Number Lines	<ol style="list-style-type: none"> 1. Percents of numbers CSB 2. Find the whole given a part and a percent 5S4
Lesson 12: Percentages and Tape Diagrams	<ol style="list-style-type: none"> 1. Solve percent problems using strip models MEA
Lesson 13: Benchmark Percentages	<ol style="list-style-type: none"> 1. Solve percent problems: benchmark percents 9EA
Lesson 14: Solving Percentage Problems	<ol style="list-style-type: none"> 1. Which is the better coupon? 99Y 2. Sale prices 5GH 3. Sale prices: find the original price NW7
Lesson 15: Finding This Percent of That	<ol style="list-style-type: none"> 1. Percents of numbers and money amounts 8N4 2. Percents of numbers: word problems BBY
Lesson 16: Finding the Percentage	<ol style="list-style-type: none"> 1. Find what percent one number is of another PE7 2. Find what percent one number is of another: word problems 49B

Let's Put it to Work

Textbook section	IXL skills
Lesson 17: Painting a Room	<ol style="list-style-type: none"> 1. Solve percent problems ELY 2. Solve percent word problems YWB

Unit 4

Dividing Fractions

Making Sense of Division

Textbook section	IXL skills
Lesson 1: Size of Divisor and Size of Quotient	<ol style="list-style-type: none"> 1. Division patterns with zeroes CEZ 2. Estimate quotients when dividing mixed numbers HHV
Lesson 2: Meanings of Division	<ol style="list-style-type: none"> 1. Relate multiplication and division X5X 2. Write and solve multiplication and division equations using diagrams: word problems ZP6
Lesson 3: Interpreting Division Situations	

Meanings of Fraction Division

Textbook section	IXL skills
Lesson 4: How Many Groups? (Part 1)	<ol style="list-style-type: none"> 1. Divide whole numbers by unit fractions using models DXW
Lesson 5: How Many Groups? (Part 2)	
Lesson 6: Using Diagrams to Find the Number of Groups	<ul style="list-style-type: none"> • <i>Coming soon:</i> Divide whole numbers and fractions using models: quotients greater than 1
Lesson 7: What Fraction of a Group?	<ul style="list-style-type: none"> • <i>Coming soon:</i> Divide whole numbers and fractions using models: quotients less than 1
Lesson 8: How Much in Each Group? (Part 1)	<ul style="list-style-type: none"> • <i>Coming soon:</i> Divide fractions using models
Lesson 9: How Much in Each Group (Part 2)	<ul style="list-style-type: none"> • <i>Coming soon:</i> Divide fractions using models: word problems

Algorithm for Fraction Division

Textbook section	IXL skills
Lesson 10: Dividing by Unit and Non-Unit Fractions	1. Divide unit fractions and whole numbers: word problems HCH <i>Also consider</i> • Reciprocals R9V
Lesson 11: Using an Algorithm to Divide Fractions	1. Divide fractions DS2 2. Divide fractions and mixed numbers N2B

Fractions in Lengths, Areas, and Volumes

Textbook section	IXL skills
Lesson 12: Fractional Lengths	1. Divide fractions and mixed numbers: word problems WAH
Lesson 13: Rectangles with Fractional Side Lengths	
Lesson 14: Fractional Lengths in Triangles and Prisms	
Lesson 15: Volume of Prisms	1. Volume of cubes and rectangular prisms with fractional side lengths BQK

Let's Put it to Work

Textbook section	IXL skills
Lesson 16: Solving Problems Involving Fractions	1. Add, subtract, multiply, or divide two fractions 2VR 2. Add, subtract, multiply, or divide two fractions: word problems RDY
Lesson 17: Fitting Boxes into Boxes	1. Volume of cubes and rectangular prisms: word problems JGU

Unit 5

Arithmetic in Base Ten

Warming Up to Decimals

Textbook section	IXL skills
Lesson 1: Using Decimals in a Shopping Context	<ol style="list-style-type: none"> Add and subtract money amounts: word problems DR9 Multiply money amounts: multi-step word problems 99Z

Adding and Subtracting Decimals

Textbook section	IXL skills
Lesson 2: Using Diagrams to Represent Addition and Subtraction (optional)	<ol style="list-style-type: none"> Add decimals using blocks 9F9 Add decimals MGH
Lesson 3: Adding and Subtracting Decimals with Few Non-Zero Digits	<ol style="list-style-type: none"> Equivalent decimals JVV Add and subtract decimal numbers up to hundredths 48F
Lesson 4: Adding and Subtracting Decimals with Many Non-Zero Digits	<ol style="list-style-type: none"> Add and subtract decimal numbers 79J Complete the decimal addition or subtraction sentence QRH Add and subtract decimals: word problems 97T <p><i>Also consider</i></p> <ul style="list-style-type: none"> Maps with decimal distances J7D

Multiplying Decimals

Textbook section	IXL skills
Lesson 5: Decimal Points in Products	<ol style="list-style-type: none"> Multiply by 0.1 or 0.01 UPR Multiply two decimals: where does the decimal point go? 5K4
Lesson 6: Methods for Multiplying Decimals	<ol style="list-style-type: none"> Complete the decimal multiplication sentence using grids F8D

Lesson 7: Using Diagrams to Represent Multiplication

1. Multiply decimals using grids NY9
2. Multiply a decimal by a two-digit whole number using area models 89M

Lesson 8: Calculating Products of Decimals

1. Multiply decimals 2WT
2. Area of rectangles and squares: decimal side lengths T9L

Dividing Decimals

Textbook section

IXL skills

Lesson 9: Using the Partial Quotients Method

1. Divide using partial quotients 84L

Lesson 10: Using Long Division

1. Divide by 1-digit numbers RQF

Lesson 11: Dividing Numbers that Result in Decimals

1. Division with decimal quotients 8WR

Also consider

- Convert between percents, fractions, and decimals ZAV

Lesson 12: Dividing Decimals by Whole Numbers

1. Divide decimals using blocks: complete the equation 55Q
2. Divide decimals by whole numbers NLL
3. Divide decimals by whole numbers: word problems F6H

Lesson 13: Dividing Decimals by Decimals

1. Divide decimals Y7C

Also consider

- Add, subtract, multiply, or divide two decimals P6W

Let's Put it to Work

Textbook section

IXL skills

Lesson 14: Using Operations on Decimals to Solve Problems

1. Estimate decimal quotients KFF
2. Add, subtract, multiply, or divide two decimals: word problems 8HT

Lesson 15: Making and Measuring Boxes

1. Surface area of cubes and rectangular prisms: decimal edge lengths E94

Unit 6

Expressions and Equations

Equations in One Variable

Textbook section	IXL skills
Lesson 1: Tape Diagrams and Equations	
Lesson 2: Truth and Equations	<ol style="list-style-type: none"> Does x satisfy an equation? VMB Which x satisfies an equation? VG8 Equations with mixed operations: true or false FM7
Lesson 3: Staying in Balance	<ol style="list-style-type: none"> Write and solve equations that represent diagrams K9U <p><i>Also consider</i></p> <ul style="list-style-type: none"> Model and solve equations using algebra tiles G6Z
Lesson 4: Practice Solving Equations and Representing Situations with Equations	<ol style="list-style-type: none"> Write a one-step equation: word problems YVX Solve one-step addition and multiplication equations TG5
Lesson 5: A New Way to Interpret a over b	<ol style="list-style-type: none"> Which word problem matches the one-step equation? WYQ

Equal and Equivalent

Textbook section	IXL skills
Lesson 6: Write Expressions Where Letters Stand for Numbers	<ol style="list-style-type: none"> Write variable expressions: word problems 6LQ Solve one-step equations: word problems BXY <p><i>Also consider</i></p> <ul style="list-style-type: none"> Evaluate variable expressions with whole numbers Q8Z
Lesson 7: Revisit Percentages	<ol style="list-style-type: none"> Find the total given a part and a percent D6L

Lesson 8: Equal and Equivalent

1. Identify equivalent expressions using strip models GZH

Lesson 9: The Distributive Property, Part 1

1. Multiply numbers using the distributive property S6S
2. Multiply a decimal by a one-digit whole number using the distributive property PYT

Also consider

- Identify terms and coefficients 9KE

Lesson 10: The Distributive Property, Part 2

1. Multiply using the distributive property 2HH
2. Identify equivalent expressions I KFG

Lesson 11: The Distributive Property, Part 3

1. Factor using the distributive property PGZ
2. Identify equivalent expressions II HTG

Also consider

- Write equivalent expressions using properties R8H

Expressions with Exponents

Textbook section	IXL skills
Lesson 12: Meaning of Exponents	<ol style="list-style-type: none"> 1. Write multiplication expressions using exponents TY5 2. Evaluate exponents KEQ
Lesson 13: Expressions with Exponents	<ol style="list-style-type: none"> 1. Exponents with decimal bases D5D 2. Exponents with fractional bases GEQ
Lesson 14: Evaluating Expressions with Exponents	<ol style="list-style-type: none"> 1. Evaluate numerical expressions one step at a time XCQ 2. Evaluate expressions with exponents EAK <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Evaluate expressions with fractions and exponents M96
Lesson 15: Equivalent Exponential Expressions	<ol style="list-style-type: none"> 1. Evaluate multi-variable expressions with exponents YP7 2. Find the missing exponent or base EYK

Relationships Between Quantities

Textbook section	IXL skills
Lesson 16: Two Related Quantities, Part 1	<ol style="list-style-type: none">1. Identify independent and dependent variables in tables and graphs YFW2. Ratios and rates: complete a table and make a graph 6Z2
Lesson 17: Two Related Quantities, Part 2	<ol style="list-style-type: none">1. Write an equation from a graph using a table UJR2. Interpret a graph: word problems KZD3. Complete a table and graph a proportional relationship TZQ
Lesson 18: More Relationships (optional)	

Let's Put it to Work

Textbook section	IXL skills
Lesson 19: Tables, Equations, and Graphs, Oh My!	<ol style="list-style-type: none">1. Complete a table for a two-variable relationship J662. Write a two-variable equation from a table AQQ3. Identify the graph of an equation QSX

Unit 7

Rational Numbers

Negative Numbers and Absolute Value

Textbook section	IXL skills
Lesson 1: Positive and Negative Numbers	<ol style="list-style-type: none"> 1. Understanding integers 8EP 2. Integers on number lines K6J 3. Graph integers on horizontal and vertical number lines 36C
Lesson 2: Points on the Number Line	<ol style="list-style-type: none"> 1. Rational numbers on number lines DJE 2. Understanding opposite integers X8L
Lesson 3: Comparing Positive and Negative Numbers	<ol style="list-style-type: none"> 1. Compare integers 4G6 2. Compare rational numbers SPG <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Compare temperatures above and below zero UVD
Lesson 4: Ordering Rational Numbers	<ol style="list-style-type: none"> 1. Put integers in order CMQ 2. Put rational numbers in order UM7
Lesson 5: Using Negative Numbers to Make Sense of Contexts	<ol style="list-style-type: none"> 1. Compare and order rational numbers: word problems ETK
Lesson 6: Absolute Value of Numbers	<ol style="list-style-type: none"> 1. Understanding absolute value TLR 2. Absolute value RSL 3. Absolute value and integers: word problems 9CW
Lesson 7: Comparing Numbers and Distance from Zero	<ol style="list-style-type: none"> 1. Rational numbers: find the sign V2E 2. Inequalities with absolute values W9Z

Inequalities

Textbook section	IXL skills
Lesson 8: Writing and Graphing Inequalities	<ol style="list-style-type: none"> Graph inequalities on number lines CXX Write inequalities from number lines N99
Lesson 9: Solutions of Inequalities	<ol style="list-style-type: none"> Solutions to inequalities P9N
Lesson 10: Interpreting Inequalities	<ol style="list-style-type: none"> Write and graph inequalities: word problems AGB

The Coordinate Plane

Textbook section	IXL skills
Lesson 11: Points on the Coordinate Plane	<ol style="list-style-type: none"> Objects on a coordinate plane GFN Graph points on a coordinate plane VHQ
Lesson 12: Constructing the Coordinate Plane	<ol style="list-style-type: none"> Quadrants LPF
Lesson 13: Interpreting Points on a Coordinate Plane	<ol style="list-style-type: none"> Coordinate planes as maps N96 Follow directions on a coordinate plane XDQ
Lesson 14: Distances on a Coordinate Plane	<ol style="list-style-type: none"> Distance between two points A7P Reflect a point over an axis 32S
Lesson 15: Shapes on the Coordinate Plane	<ol style="list-style-type: none"> Graph triangles and quadrilaterals E55 Area and perimeter of squares and rectangles on the coordinate plane UCD

Common Factors and Common Multiples

Textbook section	IXL skills
Lesson 16: Common Factors	<ol style="list-style-type: none"> Identify factors BGJ Find all the factor pairs of a number VTM Greatest common factor AMB <p><i>Also consider</i></p> <ul style="list-style-type: none"> Greatest common factor of three or four numbers FBD

Lesson 17: Common Multiples

1. Choose the multiples of a given number PE2
2. Least common multiple NGA

Also consider

- Least common multiple of three or four numbers ZRM

Lesson 18: Using Common Multiples and Common Factors

1. GCF and LCM: word problems ZB8

Let's Put it to Work**Textbook section****IXL skills****Lesson 19:** Drawing on the Coordinate Plane

1. Coordinate plane review Y8A

Unit 8

Data Sets and Distributions

Data, Variability, and Statistical Questions

Textbook section	IXL skills
Lesson 1: Got Data?	
Lesson 2: Statistical Questions	1. Identify statistical questions PT7

Dot Plots and Histograms

Textbook section	IXL skills
Lesson 3: Representing Data Graphically	1. Create frequency charts UUN 2. Interpret line plots M5Y 3. Create line plots 5HD <i>Also consider</i> <ul style="list-style-type: none"> • Create frequency charts: categorical data BSQ • Interpret bar graphs UQA • Create bar graphs J8V
Lesson 4: Dot Plots	1. Describe shapes of distributions in line plots K6Y
Lesson 5: Using Dot Plots to Answer Statistical Questions	<ul style="list-style-type: none"> • <i>Coming soon:</i> Which scenario does the line plot represent? • <i>Coming soon:</i> Interpret center and variability using line plots
Lesson 6: Interpreting Histograms	1. Interpret histograms CBF 2. Create histograms 7NG
Lesson 7: Using Histograms to Answer Statistical Questions	<ul style="list-style-type: none"> • <i>Coming soon:</i> Which scenario does the histogram represent? • <i>Coming soon:</i> Interpret center and variability using histograms
Lesson 8: Describing Distributions on Histograms	<ul style="list-style-type: none"> • <i>Coming soon:</i> Describe distributions in histograms

Measures of Center and Variability

Textbook section	IXL skills
Lesson 9: Mean	<ol style="list-style-type: none"> 1. Calculate mean BK7 2. Mean: find the missing number BCP
Lesson 10: Finding and Interpreting the Mean as the Balance Point	<ul style="list-style-type: none"> • <i>Coming soon:</i> Interpret the mean as a balance point
Lesson 11: Variability and MAD	<ol style="list-style-type: none"> 1. Calculate mean absolute deviation JUV
Lesson 12: Using Mean and MAD to Make Comparisons	<ul style="list-style-type: none"> • <i>Coming soon:</i> Interpret mean and MAD

Median and IQR

Textbook section	IXL skills
Lesson 13: Median	<ol style="list-style-type: none"> 1. Calculate median XTJ
Lesson 14: Comparing Mean and Median	<ol style="list-style-type: none"> 1. Changes in mean and median KPA
Lesson 15: Quartiles and Interquartile Range	<ol style="list-style-type: none"> 1. Calculate range, quartiles, and interquartile range Z85 2. Measures of center and spread 6JB
Lesson 16: Box Plots	<ol style="list-style-type: none"> 1. Box plots E9F
Lesson 17: Using Box Plots	

Let's Put it to Work

Textbook section	IXL skills
Lesson 18: Using Data to Solve Problems	