



# IXL Skill Alignment

Grade 6 alignment for enVision Mathematics Common Core



Use IXL's interactive skill plan to get up-to-date skill alignments, assign skills to your students, and track progress.

[www.ixl.com/math/skill-plans/envision-mathematics-2021-common-core-grade-6](http://www.ixl.com/math/skill-plans/envision-mathematics-2021-common-core-grade-6)

This document includes the IXL® skill alignments to Savvas Learning Company's **enVision Mathematics Common Core** curriculum. IXL provides skill alignments as a service to teachers, students, and parents. The skill alignments are provided by IXL and are not affiliated with, sponsored by, reviewed, approved or endorsed by Savvas Learning Company or any other third party. IXL® and IXL Learning® are registered trademarks of IXL Learning, Inc. All other intellectual property rights (e.g., unregistered and registered trademarks and copyrights) are the property of their respective owners.

Visit [IXL.com](http://IXL.com) for more information

IXL Learning © 2021

# Topic 1

## Use Positive Rational Numbers

Textbook section	IXL skills
<b>Lesson 1-1:</b> Fluently Add, Subtract, and Multiply Decimals	<ol style="list-style-type: none"> <li>Add and subtract decimals 4F6</li> <li>Multiply with decimals 6T4</li> <li>Add, subtract, and multiply decimals: word problems 777</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Multiply decimals using grids NY9</li> <li>Multiply two decimals: where does the decimal point go? 5K4</li> <li>Estimate sums and differences of decimals SJ6</li> </ul>
<b>Lesson 1-2:</b> Fluently Divide Whole Numbers and Decimals	<ol style="list-style-type: none"> <li>Division with decimal quotients 8WR</li> <li>Divide decimals EN5</li> <li>Multiply and divide decimals: word problems GZN</li> </ol>
<b>Lesson 1-3:</b> Multiply Fractions	<ol style="list-style-type: none"> <li>Multiply two fractions BNT</li> <li>Multiply mixed numbers Z9M</li> <li>Multiply fractions and mixed numbers: word problems RS6</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Multiply two fractions using models B7P</li> <li>Estimate products of mixed numbers 5BG</li> <li>Multiply with mixed numbers using area models LGS</li> </ul>
<b>Lesson 1-4:</b> Understand Division with Fractions	<ol style="list-style-type: none"> <li>Divide fractions and whole numbers 9GY</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Reciprocals R9V</li> </ul>
<b>Lesson 1-5:</b> Divide Fractions by Fractions	<ol style="list-style-type: none"> <li>Divide fractions DS2</li> <li>Divide fractions: word problems CLN</li> </ol>

**Lesson 1-6:** Divide Mixed Numbers

1. Divide fractions and mixed numbers N2B
2. Divide fractions and mixed numbers: word problems WAH

*Also consider*

- Estimate quotients with mixed numbers 82P

**Lesson 1-7:** Solve Problems with Rational Numbers

1. Multi-step word problems with rational numbers RFM
2. Multiply money amounts: multi-step word problems 99Z

## Topic 2

### Integers and Rational Numbers

Textbook section	IXL skills
<b>Lesson 2-1:</b> Understand Integers	<ol style="list-style-type: none"> <li>Graph integers on horizontal and vertical number lines 36C</li> <li>Understanding opposite integers X8L</li> <li>Compare and order integers 7ZF</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Understanding integers 8EP</li> </ul>
<b>Lesson 2-2:</b> Represent Rational Numbers on the Number Line	<ol style="list-style-type: none"> <li>Rational numbers on number lines DJE</li> <li>Compare and order rational numbers MFM</li> <li>Compare and order rational numbers: word problems ETK</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Compare and order rational numbers using number lines FMS</li> <li>Classify rational numbers using a diagram 64K</li> </ul>
<b>Lesson 2-3:</b> Absolute Values of Rational Numbers	<ol style="list-style-type: none"> <li>Understanding absolute value TLR</li> <li>Absolute value RSL</li> <li>Absolute value and integers: word problems 9CW</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Inequalities with absolute values W9Z</li> </ul>
<b>Lesson 2-4:</b> Represent Rational Numbers on the Coordinate Plane	<ol style="list-style-type: none"> <li>Objects on a coordinate plane GFN</li> <li>Graph points on a coordinate plane VHQ</li> <li>Reflections of points KDG</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Quadrants F5T</li> <li>Describe the coordinate plane KU7</li> </ul>

**Lesson 2-5:** Find Distances on the Coordinate Plane

1. Distances on coordinate planes as maps 2QH
2. Distance between two points A7P

*Also consider*

- Follow directions on a coordinate plane XDQ

**Lesson 2-6:** Represent Polygons on the Coordinate Plane

1. Graph quadrilaterals on the coordinate plane ASR
2. Area and perimeter of squares and rectangles on the coordinate plane UCD

# Topic 3

## Numeric and Algebraic Expressions

### Textbook section

### IXL skills

**Lesson 3-1:** Understand and Represent Exponents

1. Write multiplication expressions using exponents TY5
2. Evaluate exponents ENJ
3. Multiply a decimal by a power of ten: with exponents JTV

*Also consider*

- Find the missing exponent or base HC5

**Lesson 3-2:** Find Greatest Common Factor and Least Common Multiple

1. Prime factorization 9CP
2. Greatest common factor AMB
3. Least common multiple NGA

*Also consider*

- GCF and LCM: word problems ZB8
- Prime factorization with exponents WLU

**Lesson 3-3:** Write and Evaluate Numerical Expressions

1. Evaluate numerical expressions involving whole numbers MLU
2. Evaluate numerical expressions with parentheses in different places NCR
3. Write numerical expressions for word problems XB2

*Also consider*

- Evaluate numerical expressions one step at a time XCQ
- Evaluate numerical expressions involving decimals YEE
- Evaluate numerical expressions involving fractions WNE
- Identify mistakes involving the order of operations V46

**Lesson 3-4:** Write Algebraic Expressions

1. Write variable expressions RCV
2. Write variable expressions: word problems 6LQ
3. Identify terms and coefficients 9KE

**Lesson 3-5:** Evaluate Algebraic Expressions

1. Evaluate variable expressions SY5
2. Evaluate variable expressions with decimals, fractions, and mixed numbers 49T
3. Evaluate variable expressions: word problems 7XA

**Lesson 3-6:** Generate Equivalent Expressions

1. Multiply using the distributive property 2HH
2. Factor using the distributive property PGZ

*Also consider*

- Write equivalent expressions using properties R8H

**Lesson 3-7:** Simplify Algebraic Expressions

1. Add and subtract like terms CN9
2. Identify equivalent expressions I KFG
3. Identify equivalent expressions II HTG

*Also consider*

- Identify equivalent expressions using strip models W5U

# Topic 4

## Represent and Solve Equations and Inequalities

Textbook section	IXL skills
<b>Lesson 4-1:</b> Understand Equations and Solutions	<ol style="list-style-type: none"> <li>1. Does <math>x</math> satisfy an equation? VMB</li> <li>2. Which <math>x</math> satisfies an equation? VG8</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Identify expressions and equations GCQ</li> </ul>
<b>Lesson 4-2:</b> Apply Properties of Equality	<ol style="list-style-type: none"> <li>1. Properties of equality 5NB</li> </ol>
<b>Lesson 4-3:</b> Write and Solve Addition and Subtraction Equations	<ol style="list-style-type: none"> <li>1. Solve one-step addition and subtraction equations with whole numbers JXM</li> <li>2. Solve one-step addition and subtraction equations: word problems 35Q</li> <li>3. Write and solve addition and subtraction equations using diagrams: word problems DWH</li> </ol>
<b>Lesson 4-4:</b> Write and Solve Multiplication and Division Equations	<ol style="list-style-type: none"> <li>1. Solve one-step multiplication and division equations with whole numbers JUA</li> <li>2. Write and solve multiplication and division equations using diagrams: word problems ZP6</li> <li>3. Solve one-step multiplication and division equations: word problems GMV</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Solve one-step equations with whole numbers WLR</li> <li>• Which word problem matches the one-step equation? WYQ</li> </ul>
<b>Lesson 4-5:</b> Write and Solve Equations with Rational Numbers	<ol style="list-style-type: none"> <li>1. Solve one-step addition and subtraction equations with decimals, fractions, and mixed numbers 5D2</li> <li>2. Solve one-step multiplication and division equations with decimals, fractions, and whole numbers T53</li> <li>3. Solve one-step equations: word problems BXY</li> </ol>
<b>Lesson 4-6:</b> Understand and Write Inequalities	<ol style="list-style-type: none"> <li>1. Solutions to inequalities P9N</li> </ol>



**Lesson 4-7:** Solve Inequalities

1. Graph inequalities on number lines 6VS
2. Write inequalities from number lines CKJ
3. Write and graph inequalities: word problems AGB

**Lesson 4-8:** Understand Dependent and Independent Variables

1. Identify independent and dependent variables: word problems 9UJ

*Also consider*

- Identify independent and dependent variables in tables and graphs YFW

**Lesson 4-9:** Use Patterns to Write and Solve Equations

1. Complete a table for a two-variable relationship MJF
2. Write a two-variable equation from a table ZTL
3. Find a value using two-variable equations: word problems SLK

*Also consider*

- Write a two-variable equation 2RE
- Solve word problems by finding two-variable equations UJQ

**Lesson 4-10:** Relate Tables, Graphs, and Equations

1. Write an equation from a graph using a table BCM
2. Complete a table and graph a two-variable equation EY5
3. Graph a two-variable equation TJA

*Also consider*

- Identify the graph of an equation WN7
- Interpret a graph: word problems KZD

# Topic 5

## Understand and Use Ratio and Rate

Textbook section	IXL skills
<b>Lesson 5-1:</b> Understand Ratios	<ol style="list-style-type: none"> <li>1. Write a ratio V7K</li> <li>2. Use tape diagrams to solve ratio word problems B2A</li> </ol>
<b>Lesson 5-2:</b> Generate Equivalent Ratios	<ol style="list-style-type: none"> <li>1. Identify equivalent ratios 2LM</li> <li>2. Write an equivalent ratio NEA</li> <li>3. Ratio tables PPF</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Equivalent ratios: word problems RLZ</li> </ul>
<b>Lesson 5-3:</b> Compare Ratios	<ol style="list-style-type: none"> <li>1. Compare ratios: word problems 2HT</li> </ol>
<b>Lesson 5-4:</b> Represent and Graph Ratios	<ol style="list-style-type: none"> <li>1. Ratios and rates: complete a table and make a graph 6Z2</li> </ol>
<b>Lesson 5-5:</b> Understand Rates and Unit Rate	<ol style="list-style-type: none"> <li>1. Unit rates JSZ</li> <li>2. Equivalent rates 9AF</li> </ol>
<b>Lesson 5-6:</b> Compare Unit Rates	<ol style="list-style-type: none"> <li>1. Compare rates: word problems NAF</li> <li>2. Unit prices UKD</li> </ol>
<b>Lesson 5-7:</b> Solve Unit Rate Problems	<ol style="list-style-type: none"> <li>1. Ratios and rates: word problems ZB9</li> </ol>
<b>Lesson 5-8:</b> Ratio Reasoning: Convert Customary Units	<ol style="list-style-type: none"> <li>1. Convert customary units WQY</li> <li>2. Convert customary units using proportions JG8</li> <li>3. Multi-step problems with customary unit conversions CQT</li> </ol>
<b>Lesson 5-9:</b> Ratio Reasoning: Convert Metric Units	<ol style="list-style-type: none"> <li>1. Convert metric units KRR</li> <li>2. Convert metric units using proportions VLV</li> <li>3. Multi-step problems with metric unit conversions MZA</li> </ol>
<b>Lesson 5-10:</b> Relate Customary and Metric Units	<ol style="list-style-type: none"> <li>1. Convert between customary and metric systems 5CF</li> </ol>

# Topic 6

## Understand and Use Percent

Textbook section	IXL skills
<b>Lesson 6-1:</b> Understand Percent	<ol style="list-style-type: none"> <li>1. What percentage is illustrated? RHG</li> <li>2. Understanding percents: strip models 5JV</li> <li>3. Convert fractions to percents using grid models ZDZ</li> </ol>
<b>Lesson 6-2:</b> Relate Fractions, Decimals, and Percents	<ol style="list-style-type: none"> <li>1. Convert between percents, fractions, and decimals QQW</li> <li>2. Convert between percents, fractions, and decimals: word problems CGG</li> </ol>
<b>Lesson 6-3:</b> Represent Percents Greater than 100 or Less than 1	<ol style="list-style-type: none"> <li>1. Convert between percents, fractions, and decimals: percents greater than 100% B2U</li> </ol>
<b>Lesson 6-4:</b> Estimate to Find Percent	<ol style="list-style-type: none"> <li>1. Estimate percents of numbers 9CV</li> </ol>
<b>Lesson 6-5:</b> Find the Percent of a Number	<ol style="list-style-type: none"> <li>1. Percents of numbers and money amounts 8N4</li> <li>2. Find what percent one number is of another PE7</li> <li>3. Solve percent word problems YWB</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Percents of numbers: fractional and decimal percents CD5</li> <li>• Percents - calculate tax, tip, mark-up, and more 32K</li> <li>• Sale prices 5GH</li> </ul>
<b>Lesson 6-6:</b> Find the Whole Given a Part and the Percent	<ol style="list-style-type: none"> <li>1. Find the total given a part and a percent D6L</li> <li>2. Solve percent problems using strip models MEA</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Sale prices: find the original price NW7</li> </ul>

## Topic 7

### Solve Area, Surface Area, and Volume Problems

Textbook section	IXL skills
<b>Lesson 7-1:</b> Find Areas of Parallelograms and Rhombuses	<ol style="list-style-type: none"> <li>Understanding area of a parallelogram QMU</li> <li>Area of parallelograms Y8K</li> </ol>
<b>Lesson 7-2:</b> Solve Triangle Area Problems	<ol style="list-style-type: none"> <li>Understanding area of a triangle QEY</li> <li>Area of triangles C8S</li> <li>Area of quadrilaterals and triangles: word problems 9RW</li> </ol>
<b>Lesson 7-3:</b> Find Areas of Trapezoids and Kites	<ol style="list-style-type: none"> <li>Understanding area of a trapezoid 42R</li> <li>Area of trapezoids PKW</li> <li>Area of composite figures I 5PM</li> </ol>
<b>Lesson 7-4:</b> Find Areas of Polygons	<ol style="list-style-type: none"> <li>Area of composite figures II F5P</li> <li>Area between two rectangles EY6</li> <li>Area of figures on the coordinate plane 5AW</li> </ol>
<b>Lesson 7-5:</b> Represent Solid Figures Using Nets	<ol style="list-style-type: none"> <li>Nets of three-dimensional figures 8KP</li> <li>Count vertices, edges, and faces 8SF</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Which figure is being described? 9WV</li> </ul>
<b>Lesson 7-6:</b> Find Surface Areas of Prisms	<ol style="list-style-type: none"> <li>Surface area of cubes and rectangular prisms RMG</li> <li>Surface area of triangular prisms UGR</li> </ol>
<b>Lesson 7-7:</b> Find Surface Areas of Pyramids	<ol style="list-style-type: none"> <li>Surface area of pyramids 5XW</li> </ol>
<b>Lesson 7-8:</b> Find Volume with Fractional Edge Lengths	<ol style="list-style-type: none"> <li>Volume of cubes and rectangular prisms with fractional side lengths BQK</li> <li>Volume of cubes and rectangular prisms: word problems BBM</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Volume of cubes and rectangular prisms XHF</li> </ul>

# Topic 8

## Display, Describe, and Summarize Data

Textbook section	IXL skills
<b>Lesson 8-1:</b> Recognize Statistical Questions	1. Identify statistical questions PT7  <i>Also consider</i> <ul style="list-style-type: none"> <li>Interpret line plots M5Y</li> <li>Create line plots 5HD</li> </ul>
<b>Lesson 8-2:</b> Summarize Data Using Mean, Median, Mode, and Range	1. Calculate mean, median, mode, and range ZZK 2. Changes in mean, median, mode, and range 2G9  <i>Also consider</i> <ul style="list-style-type: none"> <li>Mean, median, mode, and range: find the missing number 77K</li> </ul>
<b>Lesson 8-3:</b> Display Data in Box Plots	1. Calculate quartiles F74 2. Box plots CWL
<b>Lesson 8-4:</b> Display Data in Frequency Tables and Histograms	1. Interpret frequency charts TGR 2. Create frequency charts UUN 3. Interpret histograms CBF 4. Create histograms 7NG
<b>Lesson 8-5:</b> Summarize Data Using Measures of Variability	1. Calculate mean absolute deviation JUV 2. Calculate interquartile range ZGP
<b>Lesson 8-6:</b> Choose Appropriate Statistical Measures	<ul style="list-style-type: none"> <li><i>Coming soon:</i> Choose appropriate measures to describe distributions</li> </ul> <i>Also consider</i> <ul style="list-style-type: none"> <li>Identify an outlier 86B</li> </ul>
<b>Lesson 8-7:</b> Summarize Data Distributions	1. Describe distributions in line plots RZL