



# IXL Skill Alignment

6th grade alignment for enVisionMATH 2.0 Common Core Edition

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# 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>1. Add and subtract decimal numbers 79J</li><li>2. Add and subtract decimals: word problems 97T</li><li>3. Multiply decimals 2WT</li></ol>
<b>Lesson 1-2:</b> Fluently Divide Whole Numbers and Decimals	<ol style="list-style-type: none"><li>1. Divide decimals by whole numbers NLL</li><li>2. Divide decimals by whole numbers: word problems TWZ</li><li>3. Division with decimal quotients BFR</li></ol>
<b>Lesson 1-3:</b> Multiply Fractions	<ol style="list-style-type: none"><li>1. Multiply two fractions using models B7P</li><li>2. Multiply two fractions BNT</li><li>3. Multiply fractions: word problems 94H</li><li>4. Estimate products of fractions, whole numbers, and mixed numbers 5BG</li><li>5. Multiply mixed numbers Z9M</li><li>6. Multiply mixed numbers: word problems 3P8</li></ol>
<b>Lesson 1-4:</b> Understand Division with Fractions	<ol style="list-style-type: none"><li>1. Divide whole numbers by unit fractions using models DXW</li><li>2. Reciprocals 5BT</li><li>3. Divide whole numbers and unit fractions DPA</li></ol>
<b>Lesson 1-5:</b> Divide Fractions by Fractions	<ol style="list-style-type: none"><li>1. Divide fractions D52</li></ol>
<b>Lesson 1-6:</b> Divide Mixed Numbers	<ol style="list-style-type: none"><li>1. Estimate quotients when dividing mixed numbers HHV</li><li>2. Divide fractions and mixed numbers N2B</li><li>3. Divide fractions and mixed numbers: word problems WAH</li></ol>
<b>Lesson 1-7:</b> Solve Problems with Rational Numbers	<ol style="list-style-type: none"><li>1. Add and subtract decimals: word problems 97T</li><li>2. Divide decimals by whole numbers: word problems TWZ</li><li>3. Multiply fractions: word problems 94H</li><li>4. Multiply mixed numbers: word problems 3P8</li></ol>

5. Divide fractions and mixed numbers: word problems WAH

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## Topic 2

### Integers and Rational Numbers

Textbook section	IXL skills
<b>Lesson 2-1:</b> Understanding Integers	<ol style="list-style-type: none"><li>1. Understanding integers <a href="#">8EP</a></li><li>2. Integers on number lines <a href="#">K6J</a></li><li>3. Graph integers on horizontal and vertical number lines <a href="#">36C</a></li><li>4. Compare integers <a href="#">4G6</a></li><li>5. Put integers in order <a href="#">CMQ</a></li></ol>
<b>Lesson 2-2:</b> Represent Rational Numbers on the Number Line	<ol style="list-style-type: none"><li>1. Compare rational numbers <a href="#">K52</a></li><li>2. Put rational numbers in order <a href="#">5AX</a></li><li>3. Rational numbers: find the sign <a href="#">V2E</a></li></ol>
<b>Lesson 2-3:</b> Absolute Values of Rational Numbers	<ol style="list-style-type: none"><li>1. Absolute value and opposite integers <a href="#">2YZ</a></li><li>2. Absolute value of rational numbers <a href="#">KGX</a></li></ol>
<b>Lesson 2-4:</b> Represent Rational Numbers on the Coordinate Plane	<ol style="list-style-type: none"><li>1. Objects on a coordinate plane <a href="#">GFN</a></li><li>2. Graph points on a coordinate plane <a href="#">VHQ</a></li><li>3. Quadrants <a href="#">F5T</a></li><li>4. Coordinate planes as maps <a href="#">N96</a></li></ol>
<b>Lesson 2-5:</b> Find Distances on the Coordinate Plane	<ol style="list-style-type: none"><li>1. Distance between two points <a href="#">A7P</a></li></ol>
<b>Lesson 2-6:</b> Represent Polygons on the Coordinate Plane	<ol style="list-style-type: none"><li>1. Graph triangles and quadrilaterals <a href="#">E55</a></li></ol>

# Topic 3

## Numeric and Algebraic Expressions

Textbook section	IXL skills
<b>Lesson 3-1:</b> Understand and Represent Exponents	<ol style="list-style-type: none"> <li>1. Write multiplication expressions using exponents <a href="#">TY5</a></li> <li>2. Evaluate exponents <a href="#">XDA</a></li> <li>3. Exponents with decimal bases <a href="#">D5D</a></li> <li>4. Exponents with fractional bases <a href="#">GEQ</a></li> </ol>
<b>Lesson 3-2:</b> Find Greatest Common Factor and Least Common Multiple	<ol style="list-style-type: none"> <li>1. Prime factorization <a href="#">9CP</a></li> <li>2. Prime factorization with exponents <a href="#">WLU</a></li> <li>3. Greatest common factor <a href="#">AMB</a></li> <li>4. Least common multiple <a href="#">NGA</a></li> <li>5. GCF and LCM: word problems <a href="#">ZB8</a></li> </ol>
<b>Lesson 3-3:</b> Write and Evaluate Numerical Expressions	<ol style="list-style-type: none"> <li>1. Evaluate numerical expressions involving whole numbers <a href="#">MLU</a></li> <li>2. Evaluate numerical expressions involving decimals <a href="#">YEE</a></li> <li>3. Evaluate numerical expressions involving fractions <a href="#">WNE</a></li> </ol>
<b>Lesson 3-4:</b> Write Algebraic Expressions	<ol style="list-style-type: none"> <li>1. Write variable expressions: two operations <a href="#">CX9</a></li> <li>2. Write variable expressions: word problems <a href="#">6LQ</a></li> <li>3. Identify terms and coefficients <a href="#">9KE</a></li> </ol>
<b>Lesson 3-5:</b> Evaluate Algebraic Expressions	<ol style="list-style-type: none"> <li>1. Evaluate variable expressions with whole numbers <a href="#">Q8Z</a></li> <li>2. Evaluate multi-variable expressions <a href="#">HC9</a></li> <li>3. Evaluate variable expressions with decimals, fractions, and mixed numbers <a href="#">49T</a></li> </ol>
<b>Lesson 3-6:</b> Generate Equivalent Expressions	<ol style="list-style-type: none"> <li>1. Properties of addition <a href="#">JRM</a></li> <li>2. Properties of multiplication <a href="#">HC8</a></li> <li>3. Multiply using the distributive property <a href="#">2HH</a></li> <li>4. Factor using the distributive property <a href="#">PGZ</a></li> </ol>

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

1. Write equivalent expressions using properties R8H
  2. Add and subtract like terms CN9
  3. Identify equivalent expressions II HTG
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# 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? VGB</li> </ol>
<b>Lesson 4-2:</b> Apply Properties of Equality	
<b>Lesson 4-3:</b> Write and Solve Addition and Subtraction Equations	
<b>Lesson 4-4:</b> Write and Solve Multiplication and Division Equations	<ol style="list-style-type: none"> <li>1. Write and solve equations that represent diagrams FSQ</li> <li>2. Solve one-step equations with whole numbers WLR</li> </ol>
<b>Lesson 4-5:</b> Write and Solve Equations with Rational Numbers	<ol style="list-style-type: none"> <li>1. Solve one-step equations with decimals, fractions, and mixed numbers T53</li> <li>2. Solve one-step equations: word problems BXY</li> </ol>
<b>Lesson 4-6:</b> Understand and Write Inequalities	
<b>Lesson 4-7:</b> Solve Inequalities	<ol style="list-style-type: none"> <li>1. Solutions to inequalities P9N</li> <li>2. Graph inequalities on number lines CXX</li> <li>3. Write inequalities from number lines N99</li> </ol>
<b>Lesson 4-8:</b> Understand Dependent and Independent Variables	<ol style="list-style-type: none"> <li>1. Identify independent and dependent variables 9UJ</li> </ol>
<b>Lesson 4-9:</b> Use Patterns to Write and Solve Equations	<ol style="list-style-type: none"> <li>1. Complete a table for a two-variable relationship TZB</li> <li>2. Write a two-variable equation 2RE</li> </ol>
<b>Lesson 4-10:</b> Relate Tables, Graphs, and Equations	<ol style="list-style-type: none"> <li>1. Identify the graph of an equation WN7</li> <li>2. Graph a two-variable equation TJA</li> <li>3. Write an equation from a graph using a table BCM</li> </ol>

# 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 83K</li><li>2. Write a ratio: word problems 5BQ</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><li>4. Equivalent ratios: word problems RLZ</li></ol>
<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 Graph Ratios	
<b>Lesson 5-5:</b> Understand Rates and Unit Rates	<ol style="list-style-type: none"><li>1. Unit rates JSZ</li></ol>
<b>Lesson 5-6:</b> Compare Unit Rates	
<b>Lesson 5-7:</b> Solve Unit Rate Problems	<ol style="list-style-type: none"><li>1. Unit 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 and compare customary units 9TJ</li></ol>
<b>Lesson 5-9:</b> Ratio Reasoning: Convert Metric Units	<ol style="list-style-type: none"><li>1. Convert and compare metric units FDH</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	1. What percentage is illustrated? RHG
<b>Lesson 6-2:</b> Relate Fractions, Decimals, and Percents	1. Compare percents to each other and to fractions GBY 2. Compare percents and fractions: word problems 9C8
<b>Lesson 6-3:</b> Represent Percents Greater than 100 or Less than 1	1. Convert between percents, fractions, and decimals ZAV
<b>Lesson 6-4:</b> Estimate to Find Percent	
<b>Lesson 6-5:</b> Find the Percent of a Number	1. Percents of numbers and money amounts 8N4 2. Percents of numbers: word problems BBY 3. Percents of numbers - with fractional and decimal percents CD5 4. Find what percent one number is of another PE7 5. Find what percent one number is of another: word problems 49B
<b>Lesson 6-6:</b> Find the Whole Given a Part and the Percent	1. Find the total given a part and a percent D6L

## Topic 7

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

Textbook section	IXL skills
<b>Lesson 7-1:</b> Find Areas of Parallelograms and Rhombuses	1. Area of rectangles and squares BE9
<b>Lesson 7-2:</b> Solve Triangle Area Problems	1. Area of triangles C85
<b>Lesson 7-3:</b> Find Areas of Trapezoids and Kites	1. Area of parallelograms and trapezoids PKW 2. Area of quadrilaterals 27F
<b>Lesson 7-4:</b> Find Areas of Polygons	1. Area of compound figures 76U 2. Area between two rectangles EY6
<b>Lesson 7-5:</b> Represent Solid Figures Using Nets	1. Nets of three-dimensional figures 8KP
<b>Lesson 7-6:</b> Find Surface Areas of Prisms	1. Surface area of cubes and rectangular prisms RMG
<b>Lesson 7-7:</b> Find Surface Areas of Pyramids	
<b>Lesson 7-8:</b> Find Volume With Fractional Edge Lengths	1. Volume of cubes and rectangular prisms XHF

# Topic 8

## Display, Describe, and Summarize Data

Textbook section	IXL skills
<b>Lesson 8-1:</b> Recognize Statistical Questions	
<b>Lesson 8-2:</b> Summarize Data Using Mean, Median, Mode, and Range	1. Calculate mean, median, mode, and range ZZK
<b>Lesson 8-3:</b> Display Data in Box Plots	1. Interpret box-and-whisker plots E9F
<b>Lesson 8-4:</b> Display Data in Frequency Tables and Histograms	1. Create frequency tables W8X 2. Interpret histograms CBF 3. Create histograms 7NG
<b>Lesson 8-5:</b> Summarize Data Using Measures of Variability	1. Calculate mean absolute deviation JUV
<b>Lesson 8-6:</b> Choose Appropriate Statistical Measures	
<b>Lesson 8-7:</b> Summarize Data Distributions	