



IXL Skill Alignment

4th grade alignment for enVisionMATH 2011 Common Core Edition



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Topic 1

Multiplication and Division: Meaning and Facts

Textbook section	IXL skills
1 - 1: Meanings of Multiplication	
1 - 2: Patterns for Facts	1. Multiplication facts to 12 FW9 <i>Also consider</i> <ul style="list-style-type: none"> Choose the multiples of a given number up to 12 ENC
1 - 3: Multiplication Properties	1. Multiplication facts to 12 FW9
1 - 4: 3, 4, 6, 7, and 8 as Factors	1. Multiplication facts to 12 FW9 2. Properties of multiplication B6N 3. Distributive property: find the missing factor US7 <i>Also consider</i> <ul style="list-style-type: none"> Inequalities with multiplication M9P
1 - 5: Look for a Pattern	1. Addition patterns over increasing place values YFV <i>Also consider</i> <ul style="list-style-type: none"> Use a rule to complete a number pattern 5P2 Number patterns: word problems C62 Number patterns: mixed review E77
1 - 6: Meanings of Division	1. Division facts to 12: word problems XZA
1 - 7: Relating Multiplication and Division	1. Multiplication facts up to 12: find the missing factor 76F <i>Also consider</i> <ul style="list-style-type: none"> Choose numbers with a particular quotient MYU
1 - 8: Special Quotients	1. Properties of division TNJ



1 - 9: Using Multiplication Facts to Find Division Facts

1. Multiplication facts up to 12: find the missing factor 76F
2. Division facts to 12 R95
3. Division facts to 12: word problems XZA

1 - 10: Draw a Picture and Write an Equation

Topic 2

Generate and Analyze Patterns

Textbook section	IXL skills
2 - 1: Repeating Patterns	
2 - 2: Number Sequences	
2 - 3: Extending Tables	1. Input/output tables with addition, subtraction, multiplication, and division HDS
2 - 4: Writing Rules for Situations	1. Input/output tables with addition, subtraction, multiplication, and division HDS
2 - 5: Geometric Patterns	1. Input/output tables with addition, subtraction, multiplication, and division HDS
2 - 6: Act It Out and Use Reasoning	

Topic 3

Place Value

Textbook section	IXL skills
3 - 1: Representing Numbers	<ol style="list-style-type: none">1. Convert between standard and expanded form M5V2. Writing numbers up to one million in words: convert digits to words 7WT
3 - 2: Place Value Relationships	<ol style="list-style-type: none">1. Convert between place values KVR
3 - 3: Comparing Numbers	
3 - 4: Ordering Numbers	
3 - 5: Rounding Whole Numbers	<ol style="list-style-type: none">1. Rounding: up to millions place E6V
3 - 6: Make an Organized List	<ol style="list-style-type: none">1. Combinations ESU

Topic 4

Addition and Subtraction of Whole Numbers

Textbook section	IXL skills
4 - 1: Using Mental Math to Add and Subtract	
4 - 2: Estimating Sums and Differences of Whole Numbers	<ol style="list-style-type: none"> 1. Estimate sums VMD 2. Estimate sums: word problems SB9 3. Estimate differences QJY 4. Estimate differences: word problems GWS
4 - 3: Adding Whole Numbers	<ol style="list-style-type: none"> 1. Add two numbers up to seven digits PFA 2. Add two numbers up to seven digits: word problems KJU <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Add 3 or more numbers up to millions ZMC
4 - 4: Subtracting Whole Numbers	<ol style="list-style-type: none"> 1. Subtract numbers up to seven digits VPX 2. Subtract numbers up to seven digits: word problems 9X2
4 - 5: Subtracting Across Zeros	<ol style="list-style-type: none"> 1. Subtract numbers up to seven digits VPX 2. Subtract numbers up to seven digits: word problems 9X2
4 - 6: Draw a Picture and Write an Equation	<ol style="list-style-type: none"> 1. Write variable expressions: word problems KPS 2. Write variable equations to represent word problems 5SJ

Topic 5

Number Sense: Multiplying by 1-Digit Numbers

Textbook section	IXL skills
5 - 1: Arrays and Multiplying by 10 and 100	
5 - 2: Multiplying by Multiples of 10 and 100	1. Multiplication patterns over increasing place values Y5K
5 - 3: Breaking Apart to Multiply	1. Distributive property: find the missing factor US7 2. Multiply using the distributive property LXG
5 - 4: Using Mental Math to Multiply	
5 - 5: Using Rounding to Estimate	1. Estimate products: multiply by 1-digit numbers WDG
5 - 6: Reasonableness	

Topic 6

Developing Fluency: Multiplying by 1-Digit Numbers

Textbook section	IXL skills
6 - 1: Arrays and Using an Expanded Algorithm	<ol style="list-style-type: none">1. Multiplication facts to 12 FW92. Multiply 1-digit numbers by 2-digit numbers GDW
6 - 2: Connecting the Expanded and Standard Algorithms	<ol style="list-style-type: none">1. Multiply 1-digit numbers by 2-digit numbers GDW
6 - 3: Multiplying 2-Digit by 1-Digit Numbers	<ol style="list-style-type: none">1. Multiply 1-digit numbers by 2-digit numbers GDW
6 - 4: Multiplying 3- and 4-Digit Numbers by 1-Digit Numbers	<ol style="list-style-type: none">1. Multiply 1-digit numbers by 3-digit or 4-digit numbers PPM
6 - 5: Multiplying by 1-Digit Numbers	<ol style="list-style-type: none">1. Multiply 1-digit numbers by 2-digit numbers GDW2. Multiply 1-digit numbers by 3-digit or 4-digit numbers PPM
6 - 6: Missing or Extra Information	<ol style="list-style-type: none">1. Word problems with extra or missing information X64

Topic 7

Number Sense: Multiplying by 2-Digit Numbers

Textbook section	IXL skills
7 - 1: Arrays and Multiplying 2-Digit Numbers by Multiples of 10	
7 - 2: Using Mental Math to Multiply 2-Digit Numbers	
7 - 3: Using Rounding to Estimate	<ol style="list-style-type: none">1. Estimate products: multiply by 2-digit numbers 2TR2. Estimate products: word problems WGL
7 - 4: Using Compatible Numbers to Estimate	<ol style="list-style-type: none">1. Estimate products: multiply by 2-digit numbers 2TR2. Estimate products: word problems WGL
7 - 5: Multiple-Step Problems	<ol style="list-style-type: none">1. Multi-step word problems EA9

Topic 8

Developing Fluency: Multiplying by 2-Digit Numbers

Textbook section	IXL skills
8 - 1: Arrays and Multiplying 2-Digit Numbers	<ol style="list-style-type: none">1. Box multiplication <small>ERB</small>2. Multiply a 2-digit number by a 2-digit number <small>MLC</small>3. Multiply a 2-digit number by a 2-digit number: word problems <small>GZG</small>
8 - 2: Arrays and an Expanded Algorithm	<ol style="list-style-type: none">1. Multiply a 2-digit number by a 2-digit number <small>MLC</small>2. Multiply a 2-digit number by a 2-digit number: word problems <small>GZG</small> <p><i>Also consider</i></p> <ul style="list-style-type: none">• Multiply a 2-digit number by a 2-digit number: complete the missing steps <small>XQ8</small>
8 - 3: Multiplying 2-Digit Numbers by Multiples of 10	
8 - 4: Multiplying 2-Digit by 2-Digit Numbers	<ol style="list-style-type: none">1. Multiply a 2-digit number by a 2-digit number: complete the missing steps <small>XQ8</small>2. Multiply a 2-digit number by a 2-digit number <small>MLC</small>3. Multiply a 2-digit number by a 2-digit number: word problems <small>GZG</small>
8 - 5: Two-Question Problems	<ol style="list-style-type: none">1. Multi-step word problems <small>EA9</small>

Topic 9

Number Sense: Dividing by 1-Digit Divisors

Textbook section	IXL skills
9 - 1: Using Mental Math to Divide	<ol style="list-style-type: none">1. Division facts to 12 R952. Division facts to 12: word problems XZA3. Division patterns over increasing place values Z5Y
9 - 2: Estimating Quotients	
9 - 3: Estimating Quotients for Greater Dividends	<ol style="list-style-type: none">1. Divide by 1-digit numbers: pick the better estimate 2FS
9 - 4: Dividing with Remainders	<ol style="list-style-type: none">1. Divide 2-digit numbers by 1-digit numbers 4T72. Divide 2-digit numbers by 1-digit numbers: word problems QMT
9 - 5: Multiplication and Division Stories	<ol style="list-style-type: none">1. Divide 2-digit numbers by 1-digit numbers: word problems QMT
9 - 6: Draw a Picture and Write an Equation	<ol style="list-style-type: none">1. Write variable equations to represent word problems 5SJ

Topic 10

Developing Fluency: Dividing by 1-Digit Divisors

Textbook section	IXL skills
10 - 1: Using Objects to Divide: Division as Repeated Subtraction	<ol style="list-style-type: none"> 1. Division facts to 12 R95 2. Division facts to 12: word problems XZA
10 - 2: Division as Repeated Subtraction	
10 - 3: Using Objects to Divide: Division as Sharing	<ol style="list-style-type: none"> 1. Divide 2-digit numbers by 1-digit numbers 4T7 2. Divide 2-digit numbers by 1-digit numbers: word problems QMT
10 - 4: Dividing 2-Digit by 1-Digit Numbers	<ol style="list-style-type: none"> 1. Divide 2-digit numbers by 1-digit numbers 4T7 2. Divide 2-digit numbers by 1-digit numbers: word problems QMT 3. Divide 2-digit numbers by 1-digit numbers: interpret remainders 5WV
10 - 5: Dividing 3-Digit by 1-Digit Numbers	<ol style="list-style-type: none"> 1. Divide larger numbers by 1-digit numbers GE8 2. Divide larger numbers by 1-digit numbers: word problems DKK
10 - 6: Deciding Where to Start Dividing	<ol style="list-style-type: none"> 1. Divide larger numbers by 1-digit numbers GE8 2. Divide larger numbers by 1-digit numbers: word problems DKK
10 - 7: Dividing 4-Digit Numbers by 1-Digit Numbers	<ol style="list-style-type: none"> 1. Divide larger numbers by 1-digit numbers GE8 2. Divide larger numbers by 1-digit numbers: word problems DKK
10 - 8: Multiple-Step Problems	<ol style="list-style-type: none"> 1. Multi-step word problems EA9

Topic 11

Fraction Equivalence and Ordering

Textbook section	IXL skills
11 - 1: Factors	<ol style="list-style-type: none"> 1. Multiplication facts up to 12: find the missing factor 76F 2. Identify factors 2S9
11 - 2: Prime and Composite Factors	<ol style="list-style-type: none"> 1. Prime and composite: up to 20 TNF
11 - 3: Multiples	<ol style="list-style-type: none"> 1. Choose the multiples of a given number up to 12 ENC
11 - 4: Equivalent Fractions	<ol style="list-style-type: none"> 1. Find equivalent fractions using area models HYC 2. Identify equivalent fractions GSG <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Patterns of equivalent fractions 7LH
11 - 5: Number Lines and Equivalent Fractions	<ol style="list-style-type: none"> 1. Graph equivalent fractions on number lines WQL
11 - 6: Comparing Fractions	<ol style="list-style-type: none"> 1. Compare fractions with like numerators or denominators using models Q87 2. Graph and compare fractions with like numerators or denominators on number lines 9XF 3. Compare fractions with like numerators or denominators M8E 4. Compare fractions using models 7XF 5. Compare fractions using benchmarks EHJ 6. Compare fractions 99U
11 - 7: Ordering Fractions	<ol style="list-style-type: none"> 1. Graph and order fractions on number lines 7GK 2. Order fractions with like numerators or denominators JU2 3. Order fractions MSB
11 - 8: Writing to Explain	

Topic 12

Adding and Subtracting Fractions and Mixed Numbers with Like Denominators

Textbook section	IXL skills
12 - 1: Modeling Addition of Fractions	
12 - 2: Adding Fractions with Like Denominators	
12 - 3: Modeling Subtraction of Fractions	
12 - 4: Subtraction Fractions with Like Denominators	<ol style="list-style-type: none"> 1. Add and subtract fractions with like denominators FXD 2. Add and subtract fractions with like denominators: word problems XBR
12 - 5: Adding and Subtraction on the Number Line	<ol style="list-style-type: none"> 1. Add fractions with like denominators using number lines 6QH 2. Subtract fractions with like denominators using number lines MJX 3. Add and subtract fractions with like denominators FXD 4. Add and subtract fractions with like denominators: word problems XBR
12 - 6: Improper Fractions and Mixed Numbers	<ol style="list-style-type: none"> 1. Identify mixed numbers UX6 2. Convert between improper fractions and mixed numbers JFE
12 - 7: Modeling Addition and Subtraction of Mixed Numbers	<ol style="list-style-type: none"> 1. Add and subtract mixed numbers with like denominators 9AS
12 - 8: Addition of Mixed Numbers	
12 - 9: Subtraction of Mixed Numbers	
12 - 10: Decomposing and Composing Fractions	<ol style="list-style-type: none"> 1. Decompose fractions into unit fractions XHG 2. Decompose fractions N2Z



Also consider

- Decompose fractions multiple ways UEW

12 - 11: Draw a Picture and Write an Equation

Topic 13

Extending Fraction Concepts

Textbook section	IXL skills
13 - 1: Fractions as Multiple of Unit Fractions: Using Models	<ol style="list-style-type: none"> Multiply unit fractions by whole numbers using number lines XKJ
13 - 2: Multiplying a Fraction by a Whole Number: Using Models	<ol style="list-style-type: none"> Multiply fractions by whole numbers using number lines Q7B Multiply fractions and mixed numbers by whole numbers in recipes 7B3
13 - 3: Multiplying a Fraction by a Whole Number: Using Symbols	<ol style="list-style-type: none"> Multiply unit fractions by whole numbers EXQ Multiply unit fractions by whole numbers: word problems DSB Multiply fractions by whole numbers JLH Multiply fractions by whole numbers: word problems LX8 Multiply fractions and mixed numbers by whole numbers in recipes 7B3
13 - 4: Fractions and Decimals	<ol style="list-style-type: none"> What decimal number is illustrated? B7E <p><i>Also consider</i></p> <ul style="list-style-type: none"> Convert decimals to fractions and mixed numbers DBF
13 - 5: Fractions and Decimals on a Number Line	<ol style="list-style-type: none"> Graph decimals on number lines N93 Decimal number lines EWY Graph fractions as decimals on number lines 2N9
13 - 6: Equivalent Fractions and Decimals	<ol style="list-style-type: none"> Convert fractions and mixed numbers to decimals - denominators of 10 and 100 6P7 Convert decimals to fractions and mixed numbers DBF <p><i>Also consider</i></p> <ul style="list-style-type: none"> Graph fractions as decimals on number lines 2N9 Compare decimals and fractions TB7

13 - 7: Decimal Place Value

1. What decimal number is illustrated? B7E
2. Understanding decimals expressed in words LUL
3. Convert decimals between standard and expanded form using fractions YCH

Also consider

- Place values in decimal numbers UFR
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13 - 8: Comparing and Ordering Decimals

1. Compare decimal numbers DY5
2. Put decimal numbers in order I LVX

Also consider

- Put decimal numbers in order II WFD
 - Compare decimals and fractions on number lines 8YG
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13 - 9: Using Money to Understand Decimals**13 - 10: Draw a Picture**

Topic 14

Measurement Units and Conversions

Textbook section	IXL skills
14 - 1: Using Customary Units of Length	
14 - 2: Customary Units of Capacity	
14 - 3: Units of Weight	1. Which customary unit is appropriate? YYA
14 - 4: Changing Customary Units	1. Compare and convert customary units of length A89 2. Compare and convert customary units of weight LJV 3. Compare and convert customary units of volume GAA 4. Compare and convert customary units DRM 5. Compare customary units by multiplying 8U7 <i>Also consider</i> • Conversion tables - customary units LSP
14 - 5: Writing to Explain	
14 - 6: Using Metric Units of Length	
14 - 7: Metric Units of Capacity	
14 - 8: Units of Mass	1. Which metric unit is appropriate? FPM
14 - 9: Changing Metric Units	1. Compare and convert metric units of length GZM 2. Compare and convert metric units of weight 7RC 3. Compare and convert metric units of volume FHV 4. Compare and convert metric units UL5 <i>Also consider</i> • Conversion tables - metric units YTJ



14 - 10: Units of Time

14 - 11: Work Backward

1. Multi-step word problems EA9
 2. Find start and end times: multi-step word problems ZQP
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Topic 15

Solving Measurement Problems

Textbook section	IXL skills
15 - 1: Solving Perimeter and Area Problems	<ol style="list-style-type: none">1. Perimeter of polygons HLW2. Relationship between area and perimeter SKK3. Use area and perimeter to determine cost 5GF
15 - 2: Solving Measurement Problems	
15 - 3: Solving Problems Involving Money	<ol style="list-style-type: none">1. Find the change, price, or amount paid RTE
15 - 4: Solving Problems Involving Line Plots	<ol style="list-style-type: none">1. Interpret line plots G8K2. Create line plots GNT
15 - 5: Solve a Simpler Problem and Make a Table	

Topic 16

Lines, Angles and Shapes

Textbook section	IXL skills
16 - 1: Points, Lines and Planes	1. Parallel, perpendicular, and intersecting lines 8VQ
16 - 2: Line Segments, Rays, and Angles	1. Points, lines, line segments, rays, and angles 9MK 2. Acute, right, obtuse, and straight angles R5K
16 - 3: Understanding Angles and Unit Angles	1. Angles of 90, 180, 270, and 360 degrees UQV
16 - 4: Measuring with Unit Angles	
16 - 5: Measuring Angles	1. Measure angles with a protractor NCN <i>Also consider</i> • Estimate angle measurements LUJ
16 - 6: Adding and Subtracting Angle Measures	1. Adjacent angles VJY
16 - 7: Polygons	1. Number of sides in polygons LHR 2. Parallel sides in quadrilaterals 58M
16 - 8: Triangles	1. Acute, obtuse, and right triangles 7QK 2. Scalene, isosceles, and equilateral triangles 5UV 3. Classify triangles U59
16 - 9: Quadrilaterals	1. Classify quadrilaterals A6V
16 - 10: Line Symmetry	1. Identify lines of symmetry 9FD
16 - 11: Make and Test Generalizations	