



IXL Skill Alignment

3rd grade alignment for Math Expressions 2013 Common Core



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Unit 1

Multiplication and Division with 0-5, 9, and 10

Big Idea 1: Meanings of Multiplication and Division: 5s and 2s

Textbook section	IXL skills
1-1: Multiply with 5	<ol style="list-style-type: none"> 1. Relate addition and multiplication for equal groups 8VB 2. Multiply by 5 Y9E
1-2: Multiplication as Equal Groups	<ol style="list-style-type: none"> 1. Count equal groups TUS 2. Write multiplication sentences for equal groups: factors up to 5 XWC <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Identify multiplication expressions for equal groups 9AE • Relate addition and multiplication P74 • Skip-counting LQM
1-3: Multiplication and Arrays	<ol style="list-style-type: none"> 1. Identify multiplication expressions for arrays HZL 2. Write multiplication sentences for arrays 5FZ <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Identify repeated addition in arrays: sums to 25 ER2 • Write multiplication sentences for number lines NTV
1-4: The Meaning of Division	<ol style="list-style-type: none"> 1. Relate multiplication and division for equal groups 27Y 2. Divide by 5 C9M <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Relate multiplication and division 67L • Divide by counting equal groups UYK

1-5: Multiply and Divide with 2

1. Even or odd U9Q
2. Multiply by 2 94M
3. Divide by 2 ANU

1-6: Building Fluency with 2s and 5s

1. Multiply and divide by 2 and 5 CPH

Big Idea 2: Patterns and Strategies: 9s and 10s**Textbook section****IXL skills****1-7:** Multiply and Divide with 10

1. Multiply by 10 6YD
2. Divide by 10 YRG

1-8: Multiply and Divide with 9

1. Multiply by 9 SUH
2. Divide by 9 RTB

1-9: Building Fluency with 2s, 5s, 9s, and 10s

1. Multiply and divide by 2, 5, 9, and 10 RND

Also consider

- Relate multiplication and division for arrays XSK
- Write division sentences for arrays 8RW

Big Idea 3: Strategies for Factors and Products: 3s and 4s**Textbook section****IXL skills****1-10:** Multiply and Divide with 3

1. Multiply by 3 38K
2. Divide by 3 PCL

1-11: Multiplication and Area

1. Use multiplication to find the area of a rectangle made of unit squares LC6
2. Make arrays to model multiplication PPR

Also consider

- Distributive property: find the missing factor 7VP

1-12: Multiply and Divide with 4

1. Multiply by 4 5U6
2. Divide by 4 QGT

Also consider

- Write multiplication sentences for equal groups V98
- Write division sentences for groups FSX

1-13: Use the Strategy Cards

1. Multiplication word problems: factors up to 5 HDU
2. Division word problems: divisors and quotients up to 5 CFR

Also consider

- Multiplication and division facts up to 5: true or false? 6HS

1-14: Building Fluency With 2s, 3s, 4s, 5s, 9s, and 10s

1. Multiply and divide by 2, 3, 4, 5, 9, and 10 92E

Also consider

- Multiplication facts for 2, 3, 4, 5, and 10: find the missing factor ZEY

Big Idea 4: Multiply with 1 and 0**Textbook section****IXL skills****1-15:** Multiply and Divide with 1 and 0

1. Multiply and divide with 1 and 0 XWR
2. Properties of multiplication MPE
3. Properties of addition NY2
4. Solve using properties of multiplication YPF

1-16: Solve and Create Word Problems

1. Multiplication and division word problems: factors up to 5 7HS

1-17: Play Multiplication and Division Games

1. Division facts for 2, 3, 4, 5, and 10: true or false? YSD
2. Multiplication facts for 2, 3, 4, 5, and 10: true or false? 87M
3. Division facts for 2, 3, 4, 5, and 10: sorting XDN
4. Multiplication facts for 2, 3, 4, 5, and 10: sorting REN

1-18: Building Fluency 0s, 1s, 2s, 3s, 4s, 5s, 9s, and 10s

1. Multiply and divide with 0, 1, 2, 3, 4, 5, 9, and 10 GQE



1-19: Focus on Mathematical Practices

1. Create rectangles with a given area V73

Unit 2

Multiplication and Division with 6, 7, and 8, Multiply with Multiples of 10, and Problem solving

Big Idea 1: The Remaining Multiplications

Textbook section	IXL skills
2-1: Multiply and Divide with 6	<ol style="list-style-type: none"> Multiply by 6 SX6 Divide by 6 97S
2-2: Solve Area Word Problems	<ol style="list-style-type: none"> Multiply to find the area of a rectangle made of unit squares S7G Find the area of rectangles: word problems 5HA
2-3: Multiply and Divide with 8	<ol style="list-style-type: none"> Multiply by 8 SMR Divide by 8 CVD
2-4: Write Word Problems and Equations	<ol style="list-style-type: none"> Multiplication word problems 9TA Division word problems ECS
2-5: Multiply and Divide with 7	<ol style="list-style-type: none"> Multiply by 7 9PT Divide by 7 D2F
2-6: Square Numbers	<ol style="list-style-type: none"> Squares up to 10 x 10 GMM
2-7: Practice with 6s, 7s, and 8s	<ol style="list-style-type: none"> Multiplication tables for 6, 7, 8, and 9 XT7 Division facts for 6, 7, 8, and 9 U2C Multiplication facts for 6, 7, 8, and 9: sorting TZ7 Division facts for 6, 7, 8, and 9: sorting KQR <p><i>Also consider</i></p> <ul style="list-style-type: none"> Multiplication facts for 6, 7, 8, and 9: find the missing factor X7N Multiplication facts for 6, 7, 8, and 9: true or false? EEY Division facts for 6, 7, 8, and 9: true or false? DBB

2-8: Building Fluency With 0s - 10s

1. Multiplication tables up to 10 PNV
2. Division facts up to 10 M8T
3. Multiplication facts up to 10: find the missing factor FZA
4. Division facts up to 10: find the missing number HE7

Also consider

- Multiplication input/output tables 8CM
- Division input/output tables RK9

Big Idea 2: Problem Solving and Multiples of 10

Textbook section	IXL skills
2-9: Equations and Word Problems	<ol style="list-style-type: none"> 1. Multiplication and division word problems 85K 2. Multiplication word problems: find the missing factor F6C
2-10: Write First Step Questions for Two Step Problems	<ol style="list-style-type: none"> 1. Perform multiple operations with whole numbers UKB 2. Understanding parentheses AYY
2-11: Make Sense of Two Step Word Problems	<ol style="list-style-type: none"> 1. Two-step multiplication and division word problems 8FP
2-12: Multiply with Multiples of 10	<ol style="list-style-type: none"> 1. Multiply by a multiple of ten MS6
2-13: Play Multiplication and Division Games	<ol style="list-style-type: none"> 1. Multiplication facts up to 10: sorting SUJ 2. Division facts up to 10: sorting CYJ 3. Multiplication input/output tables: find the rule D5U 4. Division input/output tables: find the rule 4Z8
2-14: Building Fluency with 0s-10s	<ol style="list-style-type: none"> 1. Multiplication facts up to 10: true or false? 3K8 2. Division facts up to 10: true or false? MPV 3. Multiplication facts up to 10: select the missing factors WZA 4. Division facts up to 10: select the missing numbers FPA
2-15: Focus on Mathematical Practices	<ol style="list-style-type: none"> 1. Multiply whole numbers in recipes PSK

Unit 3

Measurement, Time, and Graphs

Big Idea 1: Length, Capacity, Weight, and Mass

Textbook section	IXL skills
3-1: Customary Units of Length	1. Measure using an inch ruler LC2 2. Create line plots with fractions YUR <i>Also consider</i> <ul style="list-style-type: none"> Which customary unit of length is appropriate? WRB
3-2: Customary Units of Liquid Volume	1. Which unit of volume is appropriate: ounces, cups, pints, quarts, or gallons? FMR
3-3: Metric Units of Liquid Volume	1. Which metric unit of volume is appropriate? LYS
3-4: Customary Units of Weight and Metric Units of Mass	1. Which customary unit of weight is appropriate? GK8 2. Which metric unit of weight is appropriate? PTF
3-5: Solve Word Problems Involving Liquid Volume and Mass	1. Measurement word problems VPW <i>Also consider</i> <ul style="list-style-type: none"> Choose the appropriate measuring tool FTA

Big Idea 2: Time and Date

Textbook section	IXL skills
3-6: Tell Time	1. Match clocks and times LPT 2. Match analog and digital clocks L5U 3. Read clocks and write times 5ZQ <i>Also consider</i> <ul style="list-style-type: none"> A.M. or P.M. MUC
3-7: Before and After the Hour	1. Write times EQS

3-8: Elapsed Time

1. Elapsed time: find the end time U7B
2. Find the elapsed time SCQ
3. Elapsed time word problems: find the end time 5VC
4. Elapsed time word problems: find the elapsed time V9D

3-9: Add and Subtract Time

1. Find start and end times: two-step word problems C95

3-10: Solve Word Problems Involving Time

1. Time word problems: find the start, end, or elapsed time MNY

Big Idea 3: Pictographs, Bar Graphs, and Line Plots**Textbook section****IXL skills****3-11:** Read and Create Pictographs and Bar Graphs

1. Create pictographs AVG
2. Interpret pictographs Y5D
3. Create bar graphs RPF
4. Interpret bar graphs V54

Also consider

- Read a table DE2

3-12: Read and Create Bar Graphs with Multidigit Numbers

1. Create bar graphs: multi-digit numbers WYL
2. Interpret bar graphs: multi-digit numbers UP6

3-13: Represent and Organize Data

1. Interpret tally charts 8CW
2. Create frequency charts 9TG
3. Interpret frequency charts 5KV
4. Create line plots H5J
5. Interpret line plots YXD

3-14: Use Graphs to Solve Time and Measurement Word Problems

1. Use bar graphs to solve problems BCJ

3-15: Focus on Mathematical Practices

1. Create and interpret line plots with fractions B8Q

Unit 4

Multidigit Addition and Subtraction

Big Idea 1: Understand Place Value and Rounding

Textbook section	IXL skills
4-1: Make Place Value Drawings	1. Place value models up to thousands DDS
4-2: Build Numbers	1. Value of a digit: up to thousands 3M7 <i>Also consider</i> • Place value names up to thousands GEV
4-3: Place Value in Word Problems	1. Write numbers in words 2GW 2. Convert between standard and expanded form: up to 10,000 FDT <i>Also consider</i> • Convert to/from a number KSN
4-4: Practice with Place Value	1. Write numbers using place value PT9 <i>Also consider</i> • Place value word problems 5TF
4-5: Round to the Nearest Hundred	1. Round to the nearest hundred BWN 2. Estimate sums by rounding to the nearest hundred: word problems EYT
4-6: Round to the Nearest Ten	1. Rounding - nearest ten or hundred only Q65 2. Estimate sums and differences MTL 3. Estimate sums and differences: word problems BU8 <i>Also consider</i> • Round using a number line - nearest ten or hundred 6ST • Round to the nearest ten JDN

Big Idea 2: Addition and Subtraction Strategies and Group to Add

Textbook section	IXL skills
4-7: Explore Multidigit Addition	1. Add two numbers up to three digits: word problems QU2
4-8: Discuss Addition Methods	1. Add two numbers up to three digits using place value BMH <i>Also consider</i> • Add two numbers up to three digits E83
4-9: The Grouping Concept in Addition	1. Add three-digit numbers: with regrouping 9NH <i>Also consider</i> • Addition input/output tables: up to three digits MUE
4-10: Practice Addition	1. Add data from tables: up to three digits MYM <i>Also consider</i> • Add three numbers up to three digits each GSY

Big Idea 3: Ungroup to Subtract

Textbook section	IXL skills
4-11: Ungroup to Subtract	1. Subtract numbers up to three digits EHT
4-12: Subtract Across Zeros	1. Subtract across zeros 9G5
4-13: Discuss Methods of Subtracting	1. Subtract three-digit numbers: regroup tens and hundreds WR8
4-14: Relate Addition and Subtraction	1. Relate addition and subtraction sentences NYD <i>Also consider</i> • Addition up to three digits: fill in the missing digits LYB • Subtraction: fill in the missing digits V63

4-15: Subtraction Practice

1. Subtract numbers up to three digits: word problems K88

Also consider

- Subtraction input/output tables: up to three digits J9S

4-16: Addition and Subtraction Practice

1. Add and subtract three-digit numbers 2TD
2. Addition and subtraction word problems XSH

4-17: Solve Word Problems

1. Two-step addition and subtraction word problems CBA

4-18: Focus on Mathematical Practices

1. Add three numbers up to three digits each: word problems NPU

Unit 5

Write Equations to Solve Word Problems

Big Idea 1: Types of Word Problems

Textbook section	IXL skills
5-1: Addition and Subtraction Situations	<ol style="list-style-type: none"> 1. Identify equations DW9 2. Balance addition equations: up to three digits 7PE 3. Balance subtraction equations: up to three digits 8VK
5-2: Word Problems with Unknown Addends or Unknown Factors	<ol style="list-style-type: none"> 1. Solve for the variable D65 2. Write variable equations to represent word problems: multiplication and division only ZNN <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Solve for the variable: addition and subtraction only BQT • Solve for the variable: multiplication and division only AL9
5-3: Word Problems with Unknown Starts	<ol style="list-style-type: none"> 1. Complete the addition sentence: up to three digits D69 2. Complete the subtraction sentence: up to three digits MD8 <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Addition, subtraction, multiplication, and division word problems X8W
5-4: Comparison Problems	<ol style="list-style-type: none"> 1. Compare numbers: up to 10,000 D2N 2. Order numbers: up to 10,000 M5T <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Comparison word problems with addition and subtraction 5L2 • Which number is greatest/least? ELP
5-5: Comparison Problems with Misleading Language	<ol style="list-style-type: none"> 1. Comparison word problems: addition or multiplication? A52

5-6: Word Problems with Extra, Hidden, or Not Enough Information

Big Idea 2: Solve Two Step Word Problems

Textbook section	IXL skills
5-7: Write First Step Questions for Two Step Problems	1. Write variable equations to represent word problems U6P
5-8: Solve Two Step Word Problems	1. Two-step word problems: identify reasonable answers V5A
5-9: Equations and Two Step Word Problems	
5-10: Practice with Two Step Word Problems	1. Two-step mixed operation word problems SRL
5-11: Focus on Mathematical Practices	

Unit 6

Polygons, Perimeter, and Area

Big Idea 1: Analyzing Triangles and Quadrilaterals

Textbook section	IXL skills
6-1: Triangles	<ol style="list-style-type: none"> Angles greater than, less than, or equal to a right angle 2YR Is it a polygon? C2P Identify two-dimensional shapes JBT <p><i>Also consider</i></p> <ul style="list-style-type: none"> Acute, obtuse, and right triangles LRU Scalene, isosceles, and equilateral triangles CXV Count and compare sides and vertices GWA
6-2: Parallelograms, Rectangles, Squares, and Rhombuses	<ol style="list-style-type: none"> Identify parallelograms V6L Identify rhombuses ZSD Identify rectangles 47T Identify trapezoids 67A <p><i>Also consider</i></p> <ul style="list-style-type: none"> Parallel sides in quadrilaterals 6E9
6-3: Draw Quadrilaterals	<ol style="list-style-type: none"> Draw quadrilaterals 5KS
6-4: Classify Quadrilaterals	<ol style="list-style-type: none"> Classify quadrilaterals CNJ Parallel sides in quadrilaterals 6E9

Big Idea 2: Area and Perimeter

Textbook section	IXL skills
6-5: Perimeter and Area	<ol style="list-style-type: none"> Perimeter of figures on grids TQP Area of figures on grids J93 Tile a rectangle and find the area EKK Find the area of rectangles and squares 8KJ

Also consider

- Select figures with a given area XR6

6-6: Side Lengths with Area and Perimeter

1. Area and perimeter of rectangles: find the missing side length SBU
2. Find the missing side length of a rectangle: word problems DKC

Also consider

- Perimeter of rectangles ZJT

6-7: Compare Areas and Perimeters

1. Relationship between area and perimeter: find the perimeter ZWF
2. Relationship between area and perimeter: find the area KNR

Also consider

- Select two figures with the same area 7GW
- Compare area and perimeter of two figures PMF

6-8: Area of Rectilinear Figures

1. Find the areas of complex figures by dividing them into rectangles DVB

Also consider

- Find the area of complex figures SGP
- Perimeter of rectilinear shapes 65Z

6-9: Solve Perimeter and Area Problems

1. Find the area, perimeter, or side length: word problems KD8

6-10: Tangram Shapes and Area

1. Compose two-dimensional shapes AES

Also consider

- Create figures with a given area Z2H

6-11: Focus on Mathematical Practices

1. Use area and perimeter to determine cost 8H8

Unit 7

Explore Fractions

Big Idea 1: Fraction Concepts

Textbook section	IXL skills
7-1: Understand Fractions	<ol style="list-style-type: none">1. Make halves, thirds, fourths, sixths, and eighths JHE2. Match unit fractions to models CPK3. Understand fractions: fraction bars 6JL4. Decompose fractions into unit fractions using models P75 <p><i>Also consider</i></p> <ul style="list-style-type: none">• Unit fractions: modeling word problems UV8
7-2: Model Fractions	<ol style="list-style-type: none">1. Show fractions: fraction bars ZPW2. Identify fractions on number lines AWH <p><i>Also consider</i></p> <ul style="list-style-type: none">• Identify unit fractions on number lines JVC• Match fractions to models YHL
7-3: Locate Fractions on the Number Line	<ol style="list-style-type: none">1. Graph unit fractions on number lines CBW2. Graph fractions on number lines 7QM3. Graph fractions equivalent to 1 on number lines 7BL <p><i>Also consider</i></p> <ul style="list-style-type: none">• Fractions of number lines J8M
7-4: Compare Unit Fractions	<ol style="list-style-type: none">1. Compare unit fractions HVV <p><i>Also consider</i></p> <ul style="list-style-type: none">• Graph smaller or larger fractions on a number line 2PH
7-5: Compare Fractions	<ol style="list-style-type: none">1. Compare fractions using models MJ22. Compare fractions 78D

Also consider

- Compare fractions using number lines 38T
- Order fractions GBA

Big Idea 2: Equivalent Fractions

Textbook section	IXL skills
7-6: Introduce Equivalence	<ol style="list-style-type: none">1. Find equivalent fractions using area models: two models ZJ22. Find equivalent fractions using area models: one model 6DY
7-7: Equivalent Fractions	<ol style="list-style-type: none">1. Identify equivalent fractions on number lines HYM2. Find equivalent fractions using number lines JL83. Find equivalent fractions WMX <p><i>Also consider</i></p> <ul style="list-style-type: none">• Identify equivalent fractions 7DA
7-8: Problem Solving with Fractions	<ol style="list-style-type: none">1. Compare fractions in recipes 9BK
7-9: Focus on Mathematical Practices	<ol style="list-style-type: none">1. Make halves, thirds, and fourths in different ways DXJ2. Fractions of a whole: modeling word problems 9PU