

# IXL Skill Alignment

3rd alignment for enVisionMATH 2.0 Common Core Edition

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#### Understand Multiplication and Division of Whole Numbers

| Textbook section                             | IXL skills |   |
|--|------------|---|
| 1-1: Multiplication as Repeated Addition     | E.1        | Count equal groups >>                                   |
|  | E.4        | Relate addition and multiplication for equal groups >>  |
|  | N.9        | Relate addition and multiplication >>                   |
|  | See al     | 'so:  |
|  | E.2        | Identify multiplication expressions for equal groups >> |
|  | E.3        | Write multiplication sentences for equal groups >>      |
|  | H.6        | Multiplication word problems >>                         |
| 1-2: Multiplication on the Number Line       | E.8        | Write multiplication sentences for number lines >>      |
| 1-3: Arrays and Multiplication               | E.5        | Identify multiplication expressions for arrays >>       |
|  | E.6        | Write multiplication sentences for arrays >>            |
|  | E.7        | Make arrays to model multiplication >>                  |
| 1-4: The Commutative Property                |            |   |
| 1-5: Division as Sharing                     | 1.1        | Divide by counting equal groups >>                      |
|  | 1.2        | Write division sentences for groups >>                  |
|  | 1.4        | Write division sentences for arrays >>                  |
|  | L.5        | Division word problems >>                               |
|  | See also:  |   |
|  | K.7        | Division facts up to 10 >>                              |
| <b>1-6:</b> Division as Repeated Subtraction | L.5        | Division word problems >>                               |
| 1-7: Use Appropriate Tools                   |            |   |



## Multiplication Facts: Use Patterns

| Textbook section  | IXL skills  |  |
|---|---|--|
| 2-1: 2 and 5 as Factors                                 | <ul><li>F.3 Multiply by 2 &gt;&gt;</li><li>F.6 Multiply by 5 &gt;&gt;</li></ul> |  |
| <b>2-2:</b> 9 as a Factor                               | <b>F.10</b> Multiply by 9 >>  |  |
| 2-3: Apply Properties: Multiply by 0 and 1              | <ul><li>F.1 Multiply by 0 &gt;&gt;</li><li>F.2 Multiply by 1 &gt;&gt;</li></ul> |  |
| <b>2-4:</b> Multiply by 10                              | <b>F.11</b> Multiply by 10 >>   |  |
| <b>2-5:</b> Multiplication Facts: 0, 1, 2, 5, 9, and 10 |   |  |
| <b>2-6:</b> Model with Math                             |   |  |



#### Apply Properties: Multiplication Facts for 3, 4, 6, 7, and 8

| Textbook section                                      | IXL skills |  |
|---|------------|--|
| <b>3-1:</b> The Distributive Property                 |            |  |
| <b>3-2:</b> Apply Properties: 3 as a Factor           | F.4        | Multiply by 3 >>                                 |
| <b>3-3:</b> Apply Properties: 4 as a Factor           | F.5        | Multiply by 4 >>                                 |
| <b>3-4:</b> Apply Properties: 6 and 7 as Factors      | F.7        | Multiply by 6 >>                                 |
|   | F.8        | Multiply by 7 >>                                 |
| <b>3-5:</b> Apply Properties: 8 as a Factor           | F.9        | Multiply by 8 >>                                 |
| <b>3-6:</b> Practice Multiplication Facts             | G.1        | Multiplication tables for 2, 3, 4, 5, and 10 >>  |
|   | G.5        | Multiplication tables for 6, 7, 8, and 9 $>>$    |
|   | G.9        | Multiplication tables up to 10 >>                |
|   | Н.6        | Multiplication word problems >>                  |
| <b>3-7:</b> The Associative Property: Multiply with 3 | H.12       | Multiply three or more numbers >>                |
| Factors   | H.13       | Multiply three or more numbers: word problems >> |
|   | See also:  |  |
|   | N.8        | Solve using properties of multiplication >>      |



#### Use Multiplication to Divide: Division Facts

| Textbook section   | IXL skil | lls  |
|--|----------|--|
| 4-1: Relate Multiplication and Division                      | 1.3      | Relate multiplication and division for groups >>                     |
|  | 1.5      | Relate multiplication and division for arrays >>                     |
|  | See als  | 50:  |
|  | N.10     | Relate multiplication and division >>                                |
| <b>4-2:</b> Use Multiplication to Divide with 2, 3, 4, and 5 | J.2      | Divide by 2 >>   |
|  | J.3      | Divide by 3 >>   |
|  | J.4      | Divide by 4 >>   |
|  | J.5      | Divide by 5 >>   |
| <b>4-3:</b> Use Multiplication to Divide with 6 and 7        | J.6      | Divide by 6 >>   |
|  | J.7      | Divide by 7 >>   |
| <b>4-4:</b> Use Multiplication to Divide with 8 and 9        | J.8      | Divide by 8 >>   |
|  | J.9      | Divide by 9 >>   |
| <b>4-5:</b> Multiplication Patterns: Even and Odd Numbers    | A.1      | Even or odd >>   |
| <b>4-6:</b> Division Involving 0 and 1                       | J.1      | Divide by 1 >>   |
| 4-7: Practice Multiplication and Division Facts              | G.9      | Multiplication tables up to 10 >>                                    |
|  | H.6      | Multiplication word problems >>                                      |
|  | H.7      | Multiplication word problems: find the missing factor >>             |
|  | K.7      | Division facts up to 10 >>   |
|  | L.5      | Division word problems >>  |
|  | M.9      | Addition, subtraction, multiplication, and division word problems >> |
|  | M.12     | Multi-step word problems >>  |
|  | See als  | 50:  |
|  | G.12     | Multiplication facts up to 10: find the missing factor >>            |



| 4-8: Solve Multiplication and Division Equations | G.12    | Multiplication facts up to 10: find the missing factor >>     |
|--|---------|---|
|  | H.6     | Multiplication word problems >>                               |
|  | H.7     | Multiplication word problems: find the missing factor >>      |
|  | K.10    | Division facts up to 10: find the missing number >>           |
|  | L.5     | Division word problems >>                                     |
|  | M.4     | Multiplication and division facts up to 10: true or false? >> |
|  | See als | o:  |
|  | G.14    | Multiplication sentences up to 10: true or false? >>          |
|  | K.12    | Division sentences up to 10: true or false? >>                |
| <b>4-9:</b> Make Sense and Persevere             | M.12    | Multi-step word problems >>                                   |
|  | See als | o:  |
|  | H.13    | Multiply three or more numbers: word problems >>              |



#### Fluently Multiply and Divide within 100

| IXL skills |   |
|------------|---|
|            |   |
| G.4        | Multiplication facts for 2, 3, 4, 5, and 10: find the missing factor >> |
| G.8        | Multiplication facts for 6, 7, 8, and 9: find the missing factor >>     |
| G.12       | Multiplication facts up to 10: find the missing factor >>               |
| H.7        | Multiplication word problems: find the missing factor >>                |
| K.1        | Division facts for 2, 3, 4, 5, and 10 >>                                |
| K.4        | Division facts for 6, 7, 8, and 9 >>                                    |
| K.7        | Division facts up to 10 >>  |
| L.5        | Division word problems >>   |
|            |   |
| G.9        | Multiplication tables up to 10 >>                                       |
| Н.6        | Multiplication word problems >>   |
| Н.6        | Multiplication word problems >>   |
| H.7        | Multiplication word problems: find the missing factor >>                |
| L.5        | Division word problems >>   |
| See als    | o:  |
| H.13       | Multiply three or more numbers: word problems >>                        |
| M.12       | Multi-step word problems >>   |
|            |   |
|            |   |
|            |   |
|            | G.4 G.8 G.12 H.7 K.1 K.4 K.7 L.5 G.9 H.6 H.6 H.7 L.5 See als H.13       |



#### Connect Area to Multiplication and Addition

| Textbook section   | IXL skil | ls   |
|--|----------|--|
| <b>6-1:</b> Cover Regions  | FF.6     | Find the area of figures made of unit squares >> |
|  | See als  | o: Create figures with a given area >>           |
| <b>6-2:</b> Area: Nonstandard Units                              |          |  |
| <b>6-3:</b> Area: Standard Units                                 |          |  |
| <b>6-4:</b> Area of Squares and Rectangles                       | FF.10    | Find the area of rectangles and squares >>       |
| <b>6-5:</b> Apply Properties: Area and the Distributive Property |          |  |
| <b>6-6:</b> Apply Properties: Area of Irregular Shapes           | FF.14    | Find the area of complex figures >>              |
| <b>6-7:</b> Look For and Use Structure                           | FF.15    | Find the area between two rectangles >>          |



#### Represent and Interpret Data

| Textbook section  | IXL ski     | IXL skills                                       |  |
|---|-------------|--|--|
| <b>7-1:</b> Read Picture Graphs and Bar Graphs              | U.5<br>U.11 | Interpret bar graphs >> Interpret pictographs >> |  |
| <b>7-2:</b> Make Picture Graphs                             | U.12        | Create pictographs >>                            |  |
| <b>7-3:</b> Make Bar Graphs                                 | U.5<br>U.7  | Interpret bar graphs >><br>Create bar graphs >>  |  |
| <b>7-4:</b> Solve Word Problems Using Information in Graphs | U.5         | Interpret bar graphs >>                          |  |
| <b>7-5:</b> Precision                                       |             |  |  |



#### Use Strategies and Properties to Add and Subtract

| Textbook section                     | IXL skills |   |
|--------------------------------------|------------|---|
| 8-1: Addition Properties             | N.3        | Properties of addition >>                                 |
|                                      | N.4        | Solve using properties of addition >>                     |
| 8-2: Algebra: Addition Patterns      |            |   |
| 8-3: Round Whole Numbers             | P.1        | Rounding - nearest ten or hundred only >>                 |
| 8-4: Mental Math: Addition           | C.1        | Add two numbers up to three digits >>                     |
| 8-5: Mental Math: Subtraction        | D.1        | Subtract numbers up to three digits >>                    |
|                                      | D.3        | Subtract numbers up to three digits - word problems >>    |
|                                      | М.8        | Addition and subtraction word problems >>                 |
| <b>8-6:</b> Estimate Sums            | P.5        | Estimate sums up to 1,000 >>                              |
| 8-7: Estimate Differences            | P.8        | Estimate differences up to 1,000 >>                       |
| 8-8: Relate Addition and Subtraction | C.1        | Add two numbers up to three digits >>                     |
|                                      | C.3        | Add two numbers up to three digits - word problems >>     |
|                                      | D.1        | Subtract numbers up to three digits >>                    |
|                                      | D.3        | Subtract numbers up to three digits - word problems >>    |
|                                      | М.8        | Addition and subtraction word problems >>                 |
|                                      | See al:    | so:   |
|                                      | <b>C.4</b> | Complete the addition sentence - up to three digits >>    |
|                                      | D.4        | Complete the subtraction sentence - up to three digits >> |
| 8-9: Model with Math                 |            |   |



#### Fluently Add and Subtract within 1,000

| 9-1: Use Partial Sums to Add  See a C.3  9-2: Add 3-Digit Numbers  C.1 C.3 P.5  9-3: Continue to Add 3-Digit Numbers  C.1 C.3 P.5  9-4: Add 3 or More Numbers  C.6 C.7  9-5: Use Partial Difference to Subtract  D.1 D.3  P.8 | Add two numbers up to three digits >>  Iso:  Add two numbers up to three digits - word problems >>  Add two numbers up to three digits >>  Add two numbers up to three digits - word problems >> |
|---|--|
| 9-2: Add 3-Digit Numbers C.1 C.3 P.5  9-3: Continue to Add 3-Digit Numbers C.1 C.3 P.5  9-4: Add 3 or More Numbers C.6 C.7  9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.3 P.8            | Add two numbers up to three digits - word problems >>  Add two numbers up to three digits >>  Add two numbers up to three digits - word  |
| 9-2: Add 3-Digit Numbers C.1 C.3 P.5  9-3: Continue to Add 3-Digit Numbers C.1 C.3 P.5  9-4: Add 3 or More Numbers C.6 C.7  9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.3 P.8            | Add two numbers up to three digits >>  Add two numbers up to three digits - word   |
| P.5  9-3: Continue to Add 3-Digit Numbers C.1 C.3 P.5  9-4: Add 3 or More Numbers C.6 C.7  9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.1 P.8   | Add two numbers up to three digits - word  |
| 9-3: Continue to Add 3-Digit Numbers C.1 C.3 P.5 9-4: Add 3 or More Numbers C.6 C.7 9-5: Use Partial Difference to Subtract D.1 D.3 P-6: Subtract 3-Digit Numbers D.1 P.8   | · · · · · · · · · · · · · · · · · · ·  |
| 9-3: Continue to Add 3-Digit Numbers C.1 C.3 P.5  9-4: Add 3 or More Numbers C.6 C.7  9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers P.8  | processing a   |
| P.5  9-4: Add 3 or More Numbers C.6 C.7  9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.1 P.8   | Estimate sums up to 1,000 >>   |
| P.5  9-4: Add 3 or More Numbers  C.6  C.7  9-5: Use Partial Difference to Subtract  D.1  D.3  9-6: Subtract 3-Digit Numbers  D.1  P.8   | Add two numbers up to three digits >>  |
| 9-4: Add 3 or More Numbers  C.6  C.7  9-5: Use Partial Difference to Subtract  D.1  D.3  9-6: Subtract 3-Digit Numbers  D.1  P.8  | Add two numbers up to three digits - word problems >>  |
| 9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.1 D.3 P.8  | Estimate sums up to 1,000 >>   |
| 9-5: Use Partial Difference to Subtract D.1 D.3  9-6: Subtract 3-Digit Numbers D.1 D.3 P.8  | Add three numbers up to three digits each >>   |
| 9-6: Subtract 3-Digit Numbers D.1 D.3 P.8   | Add three numbers up to three digits each: word problems >>  |
| 9-6: Subtract 3-Digit Numbers D.1 D.3 P.8   | Subtract numbers up to three digits >>   |
| D.3<br>P.8  | Subtract numbers up to three digits - word problems >>   |
| P.8   | Subtract numbers up to three digits >>   |
|   | Subtract numbers up to three digits - word problems >>   |
|   | Estimate differences up to 1,000 >>  |
| <b>9-7:</b> Continue to Subtract 3-Digit Numbers <b>D.1</b>   | Subtract numbers up to three digits >>   |
| D.3   | Subtract numbers up to three digits - word   |
| P.8   | problems >>  |
| 9-8: Construct Arguments  | problems >> Estimate differences up to 1,000 >>  |



### Multiply by Multiples of 10

| Textbook section                          | IXL ski | IXL skills                       |  |
|---|---------|----------------------------------|--|
| 10-1: Use an Open Number Line to Multiply | H.1     | Multiply by a multiple of ten >> |  |
| <b>10-2:</b> Use Properties to Multiply   |         |                                  |  |
| <b>10-3:</b> Multiply by Multiples of 10  | Н.1     | Multiply by a multiple of ten >> |  |
| <b>10-4:</b> Look for and Use Structure   |         |                                  |  |



#### Use Operations with Whole Number to Solve Problems

| Textbook section   | IXL skills |
|--|------------|
| <b>11-1:</b> Solve 2-Step Word Problems: Addition and Subtraction    |            |
| <b>11-2:</b> Solve 2-Step Word Problems: Multiplication and Division |            |
| 11-3: Solve 2-Step Word Problems: All Operations                     |            |
| <b>11-4:</b> Critique Reasoning                                      |            |



#### **Understand Fractions as Numbers**

| .1<br>.7<br>.2<br>.3<br>.4<br>.5<br>.6<br>.8<br><i>e also</i><br>.18 | Identify equal parts >>  Match unit fractions to models >>  Understand fractions: fraction bars >>  Understand fractions: area models >>  Show fractions: fraction bars >>  Show fractions: area models >>  Match fractions to models: halves, thirds, and fourths >>  Match fractions to models >>  O:  Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >>  Graph unit fractions on number lines >> |
|--|---|
| .2<br>.3<br>.4<br>.5<br>.6<br>.8<br>.e also                          | Understand fractions: fraction bars >> Understand fractions: area models >> Show fractions: fraction bars >> Show fractions: area models >> Match fractions to models: halves, thirds, and fourths >> Match fractions to models >>  Match fractions to models >>  O: Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>  |
| .3<br>.4<br>.5<br>.6<br>.8<br><i>e also</i><br>.18                   | Understand fractions: area models >> Show fractions: fraction bars >> Show fractions: area models >> Match fractions to models: halves, thirds, and fourths >> Match fractions to models >>  Match fractions to models >>  O: Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>   |
| .4<br>.5<br>.6<br>.8<br>.e also<br>.18                               | Show fractions: fraction bars >> Show fractions: area models >> Match fractions to models: halves, thirds, and fourths >> Match fractions to models >>  Match fractions to models >>  O: Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>  |
| .5<br>.6<br>.8<br>.e also<br>.18                                     | Show fractions: area models >>  Match fractions to models: halves, thirds, and fourths >>  Match fractions to models >>  O:  Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >>  Identify fractions on number lines >>   |
| .6<br>.8<br>.e alsc<br>.18   | Match fractions to models: halves, thirds, and fourths >> Match fractions to models >>  O: Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>  |
| .8 e also .18 .11  | and fourths >>  Match fractions to models >>  o:  Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >>  Identify fractions on number lines >>  |
| e also<br>.18<br>.11   | o: Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>  |
| .11  | Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>   |
| .11  | Fractions of a whole: modeling word problems >>  Identify unit fractions on number lines >> Identify fractions on number lines >>   |
| .12  | Identify fractions on number lines >>   |
| .12  | Identify fractions on number lines >>   |
|  | •   |
| .13  | Graph unit fractions on number lines >>   |
|  |   |
| e alsc   | o:  |
| .9   | Fractions of number lines: unit fractions >>  |
| .10  | Fractions of number lines >>  |
| .14  | Graph fractions on number lines >>  |
| 7  | Graph fractions equivalent to 1 on number lines >>  |
| See also:  |   |
| .15  | Graph smaller or larger fractions on a number line >>   |
| (.<br>ie   | V.14<br>K.7<br>Gee also<br>V.15   |



| 12-7: More Line Plots and Length | BB.3                    | Measure using an inch ruler >>  |
|----------------------------------|-------------------------|---|
|                                  | See als<br>U.8<br>U.9   | Interpret line plots >> Create line plots >>                            |
| 12-8: Make Sense and Persevere   | W.20                    | Fractions of a group: word problems >>                                  |
|                                  | See als<br>W.17<br>W.19 | Unit fractions: word problems >> Fractions of a whole: word problems >> |



#### Fraction Equivalence and Comparison

| Textbook section   | IXL skil  | lls   |
|--|-----------|---|
| 13-1: Equivalent Fractions: Use Models                         | X.1       | Find equivalent fractions using area models >>                        |
| 13-2: Equivalent Fractions: Use the Number Line                | X.2       | Identify equivalent fractions on number lines >>                      |
|  | X.3       | Find equivalent fractions using number lines >>                       |
|  | X.5       | Select equivalent fractions >>  |
|  | See als   | co:   |
|  | X.4       | Graph equivalent fractions on number lines >>                         |
|  | X.6       | Find equivalent fractions >>  |
| <b>13-3:</b> Use Models to Compare Fractions: Same Denominator | Y.10      | Order fractions with like denominators >>                             |
| <b>13-4:</b> Use Models to Compare Fractions: Same             | Y.1       | Compare fractions using models >>                                     |
| Numerator  | Y.6       | Compare fractions >>  |
|  | See als   | so:   |
|  | Y.11      | Order fractions with like numerators >>                               |
|  | Y.12      | Order fractions >>  |
| 13-5: Compare Fractions: Use Benchmarks                        | Y.6       | Compare fractions >>  |
|  | See also: |   |
|  | Y.8       | Benchmark fractions >>  |
| 13-6: Compare Fractions: Use the Number Line                   | Y.2       | Compare fractions using number lines >>                               |
|  | Y.3       | Graph and compare fractions with like denominators on number lines >> |
|  | Y.4       | Graph and compare fractions with like numerators on number lines >>   |
|  | Y.5       | Graph and compare fractions on number lines >>                        |
|  |           |   |



|                                   | See also: |   |
|-----------------------------------|-----------|---|
|                                   | Y.9       | Graph and order fractions on number lines >>                      |
| 13-7: Whole Numbers and Fractions | X.8       | Select fractions equivalent to whole numbers using area models >> |
|                                   | See al.   | so:   |
|                                   | X.7       | Graph fractions equivalent to 1 on number lines >>                |
|                                   | X.9       | Find fractions equivalent to whole numbers >>                     |



#### Solve Time, Capacity, and Mass Problems

| Textbook section  | IXL skill                | s  |
|---|--------------------------|--|
| <b>14-1:</b> Time to the Minute                                   | T.1<br>T.2<br>T.3<br>T.5 | Match clocks and times >> Match analog and digital clocks >> Read clocks and write times >> Write times >> |
| <b>14-2:</b> Units of Time: Measure Elapsed Time                  | T.6<br>T.7               | Elapsed time >> Elapsed time word problems I >>  |
| <b>14-3:</b> Units of Time: Solve Word Problems                   |                          |  |
| <b>14-4:</b> Estimate Liquid Volume                               | BB.15                    | Which metric unit of volume is appropriate? >>   |
| <b>14-5:</b> Measure Liquid Volume                                | BB.15                    | Which metric unit of volume is appropriate? >>   |
| 14-6: Estimate Mass   | BB.14                    | Which metric unit of weight is appropriate? >>   |
|   | BB.21                    | Choose the appropriate measuring tool >>   |
| 14-7: Measure Mass  | BB.14                    | Which metric unit of weight is appropriate? >>   |
| <b>14-8:</b> Solve Word Problems Involving Mass and Liquid Volume |                          |  |
| 14-9: Reasoning   |                          |  |



## Attributes of Two-Dimensional Shapes

| Textbook section                                | IXL skills |                                    |
|---|------------|------------------------------------|
| <b>15-1:</b> Describe Quadrilaterals            | DD.8       | Classify quadrilaterals >>         |
| <b>15-2:</b> Classify Shapes                    | U.16       | Sort shapes into a Venn diagram >> |
| <b>15-3:</b> Analyze and Compare Quadrilaterals |            |                                    |
| <b>15-4:</b> Precision                          |            |                                    |



#### Solve Perimeter Problems

| Textbook section                                | IXL skills |  |
|---|------------|--|
| <b>16-1:</b> Understand Perimeter               |            |  |
| <b>16-2:</b> Perimeter of Common Shapes         | FF.1       | Perimeter of rectangles >>                   |
| <b>16-3:</b> Perimeter and Unknown Side Lengths | FF.4       | Perimeter: find the missing side length >>   |
| <b>16-4:</b> Same Perimeter, Different Area     | FF.10      | Find the area of rectangles and squares >>   |
|   | FF.16      | Compare area and perimeter of two figures >> |
| <b>16-5:</b> Same Area, Different Perimeter     | FF.18      | Relationship between area and perimeter l >> |
| <b>16-6:</b> Reasoning                          | FF.17      | Use area and perimeter to determine cost >>  |