



# IXL Skill Alignment

7th alignment for EngageNY Common Core Curriculum

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# Module 1

## Ratios and Proportional Relationships

Textbook section	IXL skills
<b>Topic A:</b> Proportional Relationships	<b>J.1</b> Understanding ratios >>
	<b>J.4</b> Equivalent ratios: word problems >>
	<b>J.5</b> Unit rates >>
	<b>J.6</b> Compare ratios: word problems >>
	<b>J.8</b> Do the ratios form a proportion? >>
	<b>J.9</b> Do the ratios form a proportion: word problems >>
	<b>J.11</b> Solve proportions: word problems >>
	<b>K.1</b> Find the constant of proportionality from a table >>
	<b>K.6</b> Identify proportional relationships >>
	<b>K.8</b> Write and solve equations for proportional relationships >>
	<b>M.3</b> Unit prices >>
	<i>See also:</i>
	<b>J.2</b> Identify equivalent ratios >>
<b>Topic B:</b> Unit Rate and the Constant of Proportionality	<b>J.5</b> Unit rates >>
	<b>J.11</b> Solve proportions: word problems >>
	<b>K.1</b> Find the constant of proportionality from a table >>
	<b>K.2</b> Write equations for proportional relationships from tables >>
	<b>K.6</b> Identify proportional relationships >>
	<b>K.7</b> Interpret graphs of proportional relationships >>
	<b>U.2</b> Identify independent and dependent variables >>

*See also:*

- K.3** Identify proportional relationships by graphing >>
- K.4** Find the constant of proportionality from a graph >>
- K.5** Write equations for proportional relationships from graphs >>
- U.9** Interpret a graph: word problems >>

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**Topic C:** Ratios and Rates Involving Fractions

- G.12** Divide fractions >>
- G.13** Divide mixed numbers >>
- G.14** Divide fractions and mixed numbers: word problems >>

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**Topic D:** Ratios of Scale Drawings

- J.7** Scale drawings: word problems >>
  - AA.2** Area of rectangles and parallelograms >>
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# Module 2

## Rational Numbers

Textbook section	IXL skills
<b>Topic A:</b> Addition and Subtraction of Integers and Rational Numbers	<b>B.1</b> Understanding integers >>
	<b>B.4</b> Absolute value and opposite integers >>
	<b>C.1</b> Integer addition and subtraction rules >>
	<b>C.3</b> Add and subtract integers >>
	<b>H.3</b> Absolute value of rational numbers >>
	<b>H.6</b> Add and subtract rational numbers >>
	<i>See also:</i>
	<b>C.2</b> Add and subtract integers using counters >>
	<b>C.4</b> Complete addition and subtraction equations with integers >>
	<b>C.5</b> Add and subtract integers: word problems >>
	<b>H.7</b> Apply addition and subtraction rules >>
<b>Topic B:</b> Multiplication and Division of Integers and Rational Numbers	<b>A.3</b> Multiplicative inverses >>
	<b>C.6</b> Integer multiplication and division rules >>
	<b>C.7</b> Multiply and divide integers >>
	<b>C.8</b> Complete multiplication and division equations with integers >>
	<b>H.1</b> Convert between decimals and fractions or mixed numbers >>
	<b>H.8</b> Multiply and divide rational numbers >>
	<i>See also:</i>
	<b>C.9</b> Evaluate numerical expressions involving integers >>
	<b>E.11</b> Evaluate numerical expressions involving decimals >>
	<b>G.18</b> Evaluate numerical expressions involving fractions >>
	<b>H.9</b> Apply multiplication and division rules >>

**Topic C:** Applying Operations with Rational Numbers to Expressions and Equations

- A.3** Multiplicative inverses >>
- M.1** Add, subtract, multiply, and divide money amounts: word problems >>
- M.6** Percent of a number: tax, discount, and more >>
- M.9** Multi-step problems with percents >>
- R.2** Write variable expressions: word problems >>
- R.3** Evaluate linear expressions >>
- R.4** Evaluate multi-variable expressions >>
- S.6** Solve two-step equations >>
- S.7** Solve equations: word problems >>

*See also:*

- R.12** Write equivalent expressions using properties >>
  - S.4** Write and solve equations that represent diagrams >>
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# Module 3

## Expressions and Equations

Textbook section	IXL skills
<p><b>Topic A:</b> Use Properties of Operations to Generate Equivalent Expressions</p>	<p><b>A.3</b> Multiplicative inverses &gt;&gt;</p> <p><b>R.3</b> Evaluate linear expressions &gt;&gt;</p> <p><b>R.4</b> Evaluate multi-variable expressions &gt;&gt;</p> <p><b>R.7</b> Identify terms and coefficients &gt;&gt;</p> <p><b>R.10</b> Multiply using the distributive property &gt;&gt;</p> <p><b>R.12</b> Write equivalent expressions using properties &gt;&gt;</p> <p><b>R.13</b> Add and subtract like terms &gt;&gt;</p> <p><b>R.14</b> Add, subtract, and multiply linear expressions &gt;&gt;</p>
<p><b>Topic B:</b> Solve Problems Using Expressions, Equations, and Inequalities</p>	<p><b>N.3</b> Guess-and-check word problems &gt;&gt;</p> <p><b>S.7</b> Solve equations: word problems &gt;&gt;</p> <p><b>S.8</b> Solve equations involving like terms &gt;&gt;</p> <p><b>T.1</b> Solutions to inequalities &gt;&gt;</p> <p><b>T.2</b> Graph inequalities on number lines &gt;&gt;</p> <p><b>T.3</b> Write inequalities from number lines &gt;&gt;</p> <p><b>T.4</b> Solve one-step inequalities &gt;&gt;</p> <p><b>T.5</b> Graph solutions to one-step inequalities &gt;&gt;</p> <p><b>T.6</b> Solve two-step inequalities &gt;&gt;</p> <p><b>T.7</b> Graph solutions to two-step inequalities &gt;&gt;</p> <p><b>W.12</b> Identify complementary, supplementary, vertical, adjacent, and congruent angles &gt;&gt;</p> <p><b>W.13</b> Find measures of complementary, supplementary, vertical, and adjacent angles &gt;&gt;</p> <p><i>See also:</i></p> <p><b>S.1</b> Which <math>x</math> satisfies an equation? &gt;&gt;</p> <p><b>S.4</b> Write and solve equations that represent diagrams &gt;&gt;</p> <p><b>W.2</b> Name, measure, and classify angles &gt;&gt;</p>

**Topic C:** Use Equations and Inequalities to Solve Geometry Problems

- AA.5** Circles: calculate area, circumference, radius, and diameter >>
- AA.6** Circles: word problems >>
- AA.7** Volume >>
- AA.8** Surface area >>
- AA.10** Semicircles: calculate area, perimeter, radius, and diameter >>
- AA.11** Quarter circles: calculate area, perimeter, and radius >>
- AA.12** Area of compound figures with triangles, semicircles, and quarter circles >>
- AA.13** Area between two shapes >>

*See also:*

- Z.3** Front, side, and top view >>
  - AA.2** Area of rectangles and parallelograms >>
  - AA.3** Area of triangles and trapezoids >>
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# Module 4

## Percent and Proportional Relationships

Textbook section	IXL skills
<b>Topic A:</b> Finding the Whole	<b>L.2</b> Convert between percents, fractions, and decimals >>
	<b>L.3</b> Compare percents to fractions and decimals >>
	<b>L.5</b> Percents of numbers and money amounts >>
	<b>L.6</b> Percents of numbers: word problems >>
	<b>L.7</b> Solve percent equations >>
	<b>L.8</b> Solve percent equations: word problems >>
	<b>L.9</b> Percent of change >>
	<b>L.10</b> Percent of change: word problems >>
	<i>See also:</i>
	<b>L.1</b> What percentage is illustrated? >>
<b>Topic B:</b> Percent Problems Including More Than One Whole	<b>K.6</b> Identify proportional relationships >>
	<b>L.4</b> Estimate percents of numbers >>
	<b>M.6</b> Percent of a number: tax, discount, and more >>
	<b>M.7</b> Find the percent: tax, discount, and more >>
	<b>M.8</b> Sale prices: find the original price >>
	<b>M.9</b> Multi-step problems with percents >>
	<b>M.10</b> Estimate tips >>
<b>Topic C:</b> Scale Drawings	<b>M.11</b> Simple interest >>
<b>Topic D:</b> Population, Mixture, and Counting Problems Involving Percents	

# Module 5

## Statistics and Probability

Textbook section	IXL skills
<b>Topic A:</b> Calculating and Interpreting Probabilities	
<b>Topic B:</b> Estimating Probabilities	
<b>Topic C:</b> Random Sampling and Estimating Population Characteristics	<b>CC.6</b> Identify representative, random, and biased samples >>
<b>Topic D:</b> Comparing Populations	

# Module 6

## Geometry

Textbook section	IXL skills
<b>Topic A:</b> Unknown Angles	<b>W.12</b> Identify complementary, supplementary, vertical, adjacent, and congruent angles >> <b>W.13</b> Find measures of complementary, supplementary, vertical, and adjacent angles >>
<b>Topic B:</b> Constructing Triangles	
<b>Topic C:</b> Slicing Solids	
<b>Topic D:</b> Problems Involving Area and Surface Area	<b>AA.8</b> Surface area >> <b>AA.12</b> Area of compound figures with triangles, semicircles, and quarter circles >> <b>AA.13</b> Area between two shapes >>  <i>See also:</i> <b>AA.10</b> Semicircles: calculate area, perimeter, radius, and diameter >> <b>AA.11</b> Quarter circles: calculate area, perimeter, and radius >>
<b>Topic E:</b> Problems Involving Volume	<b>AA.7</b> Volume >>  <i>See also:</i> <b>AA.9</b> Perimeter, area, and volume: changes in scale >>