



IXL Skill Alignment

8th alignment for EngageNY Common Core Curriculum

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Module 1

Integer Exponents and Scientific Notation

Textbook section	IXL skills
Topic A: Exponential Notation and Properties of Integer Exponents	F.1 Understanding exponents >>
	F.6 Understanding negative exponents >>
	F.8 Multiplication with exponents >>
	F.9 Division with exponents >>
	F.10 Multiplication and division with exponents >>
	F.11 Power rule >>
	<i>See also:</i>
	F.7 Evaluate negative exponents >>
Topic B: Magnitude and Scientific Notation	G.1 Convert between standard and scientific notation >>
	G.2 Compare numbers written in scientific notation >>
	G.3 Multiply numbers written in scientific notation >>
	G.4 Divide numbers written in scientific notation >>

Module 2

The Concept of Congruence

Textbook section	IXL skills
Topic A: Definitions and Properties of the Basic Rigid Motions	<p>P.7 Rotations: graph the image >></p> <p>P.8 Rotations: find the coordinates >></p> <p><i>See also:</i></p> <p>P.5 Reflections: graph the image >></p> <p>P.6 Reflections: find the coordinates >></p>
Topic B: Sequencing the Basic Rigid Motions	<p>P.2 Identify reflections, rotations, and translations >></p> <p><i>See also:</i></p> <p>P.3 Translations: graph the image >></p> <p>P.4 Translations: find the coordinates >></p>
Topic C: Congruence and Angle Relationships	<p>O.12 Transversal of parallel lines >></p> <p><i>See also:</i></p> <p>O.6 Find missing angles in triangles >></p> <p>O.8 Exterior Angle Theorem >></p>
Topic D: The Pythagorean Theorem	

Module 3

Similarity

Textbook section	IXL skills
Topic A: Dilation	Q.2 Dilations: graph the image >> Q.3 Dilations: find the coordinates >> <i>See also:</i> Q.4 Dilations: scale factor and classification >>
Topic B: Similar Figures	Q.1 Similar and congruent figures >> Q.4 Dilations: scale factor and classification >> <i>See also:</i> Q.5 Side lengths and angle measures of similar figures >>
Topic C: The Pythagorean Theorem	R.5 Converse of the Pythagorean theorem: is it a right triangle? >>

Module 4

Linear Equations

Textbook section	IXL skills
Topic A: Writing and Solving Linear Equations	<p>H.10 Solve proportions >></p> <p>V.1 Write variable expressions >></p> <p>V.9 Identify terms and coefficients >></p> <p>W.1 Which x satisfies an equation? >></p> <p>W.2 Write an equation from words >></p> <p>W.8 Solve multi-step equations >></p> <p>W.9 Solve equations involving like terms >></p> <p>W.10 Solve equations with variables on both sides >></p> <p>W.11 Solve equations: mixed review >></p> <p>W.13 Solve equations: word problems >></p> <p>W.14 Find the number of solutions >></p> <p><i>See also:</i></p> <p>W.6 Solve one-step equations >></p> <p>W.7 Solve two-step equations >></p> <p>Z.13 Interpret linear functions >></p>
Topic B: Linear Equations in Two Variables and Their Graphs	<p>H.7 Solve proportions: word problems >></p> <p>I.3 Identify proportional relationships by graphing >></p> <p>I.8 Interpret graphs of proportional relationships >></p>
Topic C: Slope and Equations of Lines	<p>I.1 Find the constant of proportionality from a table >></p> <p>I.2 Write equations for proportional relationships from tables >></p> <p>I.4 Find the constant of proportionality from a graph >></p> <p>I.9 Write and solve equations for proportional relationships >></p> <p>Y.1 Find the slope of a graph >></p> <p>Y.2 Find the slope from two points >></p> <p>Y.4 Find the slope of a linear equation >></p>

- Y.6** Graph a line from an equation in slope-intercept form >>
- Y.7** Write a linear equation from a slope and y-intercept >>
- Y.8** Write a linear equation from a graph >>
- Y.9** Write a linear equation from a slope and a point >>
- Y.10** Write a linear equation from two points >>
- Z.5** Constant rate of change >>
- Z.6** Evaluate a linear function >>
- Z.7** Complete a table for a linear function >>
- Z.8** Complete a table and graph a linear function >>
- Z.12** Write linear functions: word problems >>

See also:

- I.5** Write equations for proportional relationships from graphs >>
- Y.3** Find a missing coordinate using slope >>
- Y.5** Graph a line using slope >>
- Z.2** Does (x, y) satisfy the linear function? >>
- Z.10** Write a linear function from a table >>

Topic D: Systems of Linear Equations and Their Solutions

- L.6** Convert between Celsius and Fahrenheit >>
- M.2** Guess-and-check word problems >>
- AA.1** Is (x, y) a solution to the system of equations? >>
- AA.2** Solve a system of equations by graphing >>
- AA.3** Solve a system of equations by graphing: word problems >>
- AA.4** Find the number of solutions to a system of equations by graphing >>
- AA.5** Find the number of solutions to a system of equations >>
- AA.8** Solve a system of equations using substitution >>
- AA.9** Solve a system of equations using substitution: word problems >>
- AA.10** Solve a system of equations using elimination >>

AA.11 Solve a system of equations using elimination: word problems >>

See also:

Z.9 Interpret the graph of a linear function: word problems >>

Topic E: Pythagorean Theorem

Module 5

Examples of Functions from Geometry

Textbook section	IXL skills
Topic A: Functions	I.8 Interpret graphs of proportional relationships >>
	Z.1 Identify functions >>
	Z.6 Evaluate a linear function >>
	Z.7 Complete a table for a linear function >>
	Z.10 Write a linear function from a table >>
	Z.12 Write linear functions: word problems >>
	Z.14 Identify linear and nonlinear functions >>
	<i>See also:</i>
	Z.4 Rate of change >>
	Z.15 Does (x, y) satisfy the nonlinear function? >>
Topic B: Volume	AA.9 Solve a system of equations using substitution: word problems >>
	AA.11 Solve a system of equations using elimination: word problems >>
	T.4 Area between two shapes >>
	T.9 Volume of cylinders >>
	T.13 Volume of spheres >>

Module 6

Linear Functions

Textbook section	IXL skills
Topic A: Linear Functions	<p>Y.6 Graph a line from an equation in slope-intercept form >></p> <p>Y.8 Write a linear equation from a graph >></p> <p>Y.10 Write a linear equation from two points >></p> <p>Z.5 Constant rate of change >></p> <p>Z.7 Complete a table for a linear function >></p> <p>Z.8 Complete a table and graph a linear function >></p> <p>Z.9 Interpret the graph of a linear function: word problems >></p> <p>Z.12 Write linear functions: word problems >></p> <p><i>See also:</i></p> <p>Z.14 Identify linear and nonlinear functions >></p>
Topic B: Bivariate Numerical Data	<p>CC.14 Scatter plots >></p> <p>DD.8 Outliers in scatter plots >></p> <p><i>See also:</i></p> <p>Y.10 Write a linear equation from two points >></p>
Topic C: Linear and Nonlinear Models	<p>Z.3 Identify independent and dependent variables >></p> <p>Z.12 Write linear functions: word problems >></p> <p>Z.13 Interpret linear functions >></p> <p><i>See also:</i></p> <p>K.10 Simple interest >></p>
Topic D: Bivariate Categorical Data	<p>DD.10 Identify representative, random, and biased samples >></p>

Module 7

Introduction to Irrational Numbers Using Geometry

Textbook section	IXL skills
Topic A: Square and Cube Roots	<p>F.14 Square roots of perfect squares >></p> <p>F.17 Relationship between squares and square roots >></p> <p>F.19 Cube roots of perfect cubes >></p> <p><i>See also:</i></p> <p>F.15 Positive and negative square roots >></p> <p>F.16 Estimate positive and negative square roots >></p> <p>F.18 Solve equations involving squares and square roots >></p> <p>F.20 Solve equations involving cubes and cube roots >></p>
Topic B: Decimal Expansions of Numbers	<p>D.4 Convert between decimals and fractions or mixed numbers >></p> <p>D.5 Identify rational and irrational numbers >></p> <p><i>See also:</i></p> <p>A.4 Prime factorization >></p> <p>D.7 Compare rational numbers >></p> <p>D.8 Put rational numbers in order >></p> <p>F.21 Estimate cube roots >></p> <p>T.5 Circles, semicircles, and quarter circles >></p>
Topic C: The Pythagorean Theorem	<p>N.4 Find the distance between two points >></p> <p>R.1 Pythagorean theorem: find the length of the hypotenuse >></p> <p>R.2 Pythagorean theorem: find the missing leg length >></p> <p>R.3 Pythagorean theorem: find the perimeter >></p> <p>R.4 Pythagorean theorem: word problems >></p> <p>R.5 Converse of the Pythagorean theorem: is it a right triangle? >></p>

Topic D: Applications of Radicals and Roots**T.7** Volume of cubes, prisms, and pyramids >>**T.8** Surface area of cubes, prisms, and pyramids >>**T.9** Volume of cylinders >>**T.13** Volume of spheres >>*See also:***S.5** Similar solids >>