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 >>
	See also:	
	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 >>

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Module 2

The Concept of Congruence

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

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Module 3

Similarity

Textbook section	IXL skills	
Topic A: Dilation	**Q.2**	Dilations: graph the image >>
	Q.3	Dilations: find the coordinates >>
	See also:	
	Q.4	Dilations: scale factor and classification >>
Topic B: Similar Figures	**Q.1**	Similar and congruent figures >>
	Q.4	Dilations: scale factor and classification >>
	See also:	
	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? >>

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Module 4

Linear Equations

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

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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 >>

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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 >>
	See also:	
	Z.4	Rate of change >>
	Z.15	Does (x, y) satisfy the nonlinear function? >>
	AA.9	Solve a system of equations using substitution: word problems >>
	AA.11	Solve a system of equations using elimination: word problems >>
Topic B: Volume	**T.4**	Area between two shapes >>
	T.9	Volume of cylinders >>
	T.13	Volume of spheres >>

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Module 6

Linear Functions

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

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Module 7

Introduction to Irrational Numbers Using Geometry

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

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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 >>