



# IXL Skill Alignment

Alg 1 alignment for Algebra 1 Analyze Connect Explore

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# Module 1

## Relationships Between Quantities

Textbook section	IXL skills
<b>Lesson 1.1:</b> Precision and Significant Digits	<b>E.4</b> Precision >>
<b>Lesson 1.2:</b> Dimensional Analysis	<b>C.7</b> Scale drawings: word problems >>
	<b>E.1</b> Convert rates and measurements: customary units >>
	<b>E.2</b> Convert rates and measurements: metric units >>

# Module 2

## Exponents and Real Numbers

Textbook section	IXL skills
<b>Lesson 2.1:</b> Radicals and Rational Exponents	<b>V.10</b> Evaluate integers raised to rational exponents >>
<b>Lesson 2.2:</b> Real Numbers	

# Module 3

## Expressions

Textbook section	IXL skills
<b>Lesson 3.1:</b> Evaluating Expressions	
<b>Lesson 3.2:</b> Simplifying Expressions	<b>H.3</b> Simplify variable expressions using properties >> <b>I.2</b> Simplify variable expressions involving like terms and the distributive property >>
<b>Lesson 3.3:</b> Writing Expressions	<b>I.1</b> Write variable expressions >>

# Module 4

## Equations and Inequalities in One Variable

Textbook section	IXL skills
<b>Lesson 4.1:</b> Equations in One Variable	<b>I.4</b> Write variable equations >>
	<b>J.4</b> Solve two-step linear equations >>
	<b>J.5</b> Solve advanced linear equations >>
	<b>J.6</b> Solve equations with variables on both sides >>
	<b>J.7</b> Solve equations: complete the solution >>
	<b>J.10</b> Solve linear equations: word problems >>
	<b>J.11</b> Solve linear equations: mixed review >>
<b>Lesson 4.2:</b> Inequalities in One Variable	<b>K.2</b> Write inequalities from graphs >>
	<b>K.6</b> Solve one-step linear inequalities >>
	<b>K.8</b> Solve two-step linear inequalities >>
	<b>K.10</b> Solve advanced linear inequalities >>
<b>Lesson 4.3:</b> Solving for a Variable	<b>I.8</b> Rearrange multi-variable equations >>

# Module 5

## Equations in Two Variables and Functions

Textbook section	IXL skills
<b>Lesson 5.1:</b> Equations in Two Variables	<b>Q.11</b> Interpret the graph of a function: word problems >>
<b>Lesson 5.2:</b> Representing Functions	<b>Q.2</b> Domain and range of relations >>
	<b>Q.7</b> Evaluate a function >>
	<b>Q.10</b> Complete a function table from an equation >>
	<b>S.13</b> Complete a table and graph a linear function >>
<b>Lesson 5.3:</b> Sequences	<b>P.4</b> Evaluate variable expressions for number sequences >>

# Module 6

## Linear Functions

Textbook section	IXL skills
<b>Lesson 6.1:</b> Linear Functions	<b>S.1</b> Identify linear functions >>
<b>Lesson 6.2:</b> Using Intercepts	<b>S.16</b> Standard form: find x- and y-intercepts >>
<b>Lesson 6.3:</b> Using Slope	<b>S.2</b> Find the slope of a graph >> <b>S.3</b> Find the slope from two points >>
<b>Lesson 6.4:</b> Slope-Intercept Form	<b>S.5</b> Slope-intercept form: find the slope and y-intercept >> <b>S.6</b> Slope-intercept form: graph an equation >> <b>S.7</b> Slope-intercept form: write an equation from a graph >> <b>S.10</b> Slope-intercept form: write an equation from a word problem >>
<b>Lesson 6.5:</b> Comparing Linear Functions	<b>S.14</b> Compare linear functions: graphs, tables, and equations >>
<b>Lesson 6.6:</b> Transforming Linear Functions	<b>S.25</b> Transformations of linear functions >>
<b>Lesson 6.7:</b> Writing Linear Functions	<b>S.9</b> Slope-intercept form: write an equation from a table >> <b>S.10</b> Slope-intercept form: write an equation from a word problem >> <b>S.12</b> Write linear functions to solve word problems >>

# Module 7

## Building Linear Functions

Textbook section	IXL skills
<b>Lesson 7.1:</b> Arithmetic Sequences	<b>P.2</b> Arithmetic sequences >> <b>P.5</b> Write variable expressions for arithmetic sequences >>
<b>Lesson 7.2:</b> Operations with Linear Functions	
<b>Lesson 7.3:</b> Linear Functions and Their Inverses	
<b>Lesson 7.4:</b> Linear Inequalities in Two Variables	<b>T.3</b> Graph a two-variable linear inequality >>



# Module 8

## Modeling with Linear Functions

Textbook section	IXL skills
<b>Lesson 8.1:</b> Correlation	<b>KK.10</b> Match correlation coefficients to scatter plots >>
<b>Lesson 8.2:</b> Fitting Lines to Data	<b>KK.8</b> Interpret a scatter plot >> <b>KK.12</b> Scatter plots: line of best fit >>
<b>Lesson 8.3:</b> Linear Regression	<b>KK.13</b> Find the equation of a regression line >> <b>KK.14</b> Interpret regression lines >> <b>KK.15</b> Analyze a regression line of a data set >>

# Module 9

## Systems of Equations and Inequalities

Textbook section	IXL skills
<b>Lesson 9.1:</b> Solving Linear Systems by Graphing	<b>U.2</b> Solve a system of equations by graphing >>
	<b>U.4</b> Find the number of solutions to a system of equations by graphing >>
	<b>U.6</b> Classify a system of equations by graphing >>
<b>Lesson 9.2:</b> Solving Linear Systems by Substitution	<b>U.8</b> Solve a system of equations using substitution >>
	<b>U.9</b> Solve a system of equations using substitution: word problems >>
<b>Lesson 9.3:</b> Solving Linear Systems by Adding or Subtracting	
<b>Lesson 9.4:</b> Solving Linear Systems by Multiplying	<b>U.10</b> Solve a system of equations using elimination >>
	<b>U.11</b> Solve a system of equations using elimination: word problems >>
<b>Lesson 9.5:</b> Solving Systems of Linear Inequalities	<b>T.6</b> Solve systems of linear inequalities by graphing >>

# Module 10

## Exponential Functions and Equations

Textbook section	IXL skills
<b>Lesson 10.1:</b> Exponential Functions	<b>X.1</b> Evaluate an exponential function >>
<b>Lesson 10.2:</b> Exponential Growth and Decay	<b>X.5</b> Exponential growth and decay: word problems >>
<b>Lesson 10.3:</b> Geometric Sequences	<b>P.3</b> Geometric sequences >>
	<b>P.6</b> Write variable expressions for geometric sequences >>
<b>Lesson 10.4:</b> Transforming Exponential Functions	<b>X.2</b> Match exponential functions and graphs >>
<b>Lesson 10.5:</b> Equations Involving Exponents	

# Module 11

## Modeling with Exponential Functions

Textbook section	IXL skills
<b>Lesson 11.1:</b> Exponential Regression	
<b>Lesson 11.2:</b> Comparing Linear and Exponential Models	

# Module 12

## Descriptive Statistics

Textbook section	IXL skills
<b>Lesson 12.1:</b> Two-Way Frequency Tables	
<b>Lesson 12.2:</b> Relative Frequency	

# Module 13

## Data Displays

Textbook section	IXL skills
<b>Lesson 13.1:</b> Measures of Center and Spread	<b>KK.2</b> Mean, median, mode, and range >> <b>KK.3</b> Quartiles >>
<b>Lesson 13.2:</b> Data Distributions and Outliers	<b>KK.4</b> Identify an outlier >> <b>KK.5</b> Identify an outlier and describe the effect of removing it >>
<b>Lesson 13.3:</b> Histograms	<b>N.1</b> Interpret bar graphs, line graphs, and histograms >> <b>N.2</b> Create bar graphs, line graphs, and histograms >>
<b>Lesson 13.4:</b> Box Plots	<b>N.5</b> Interpret box-and-whisker plots >>
<b>Lesson 13.5:</b> Normal Distributions	

# Module 14

## Polynomials and Operations

Textbook section	IXL skills
<b>Lesson 14.1:</b> Understanding Polynomials	<b>Z.1</b> Polynomial vocabulary >>
<b>Lesson 14.2:</b> Adding and Subtracting Polynomials	<b>Z.4</b> Add and subtract polynomials >>
<b>Lesson 14.3:</b> Multiplying Polynomials by Monomials	<b>Z.6</b> Multiply a polynomial by a monomial >>
<b>Lesson 14.4:</b> Multiplying Polynomials	<b>Z.7</b> Multiply two polynomials using algebra tiles >>
	<b>Z.8</b> Multiply two binomials >>
	<b>Z.9</b> Multiply two binomials: special cases >>
	<b>Z.10</b> Multiply polynomials >>

# Module 15

## Factoring Polynomials

Textbook section	IXL skills
<b>Lesson 15.1:</b> Factoring Polynomials	<b>AA.2</b> Factor out a monomial >> <b>AA.7</b> Factor by grouping >>
<b>Lesson 15.2:</b> Factoring $x^2 + bx + c$	<b>AA.4</b> Factor quadratics with leading coefficient 1 >>
<b>Lesson 15.3:</b> Factoring $ax^2 + bx + c$	<b>AA.5</b> Factor quadratics with other leading coefficients >>
<b>Lesson 15.4:</b> Factoring Special Products	<b>I.3</b> Factor quadratics >> <b>AA.6</b> Factor quadratics: special cases >>



# Module 16

## Solving Quadratic Equations

Textbook section	IXL skills
<b>Lesson 16.1:</b> Solve Quadratic Equations Using Square Roots	<b>BB.5</b> Solve a quadratic equation using square roots >>
<b>Lesson 16.2:</b> Solve $x^2 + bx + c = 0$ by Factoring	<b>BB.6</b> Solve a quadratic equation using the zero product property >>
<b>Lesson 16.3:</b> Solve $ax^2 + bx + c = 0$ by Factoring	<b>BB.7</b> Solve a quadratic equation by factoring >>
<b>Lesson 16.4:</b> Solve $x^2 + bx + c = 0$ by Completing the Square	<b>BB.8</b> Complete the square >>
<b>Lesson 16.5:</b> Solve $ax^2 + bx + c = 0$ by Completing the Square	<b>BB.9</b> Solve a quadratic equation by completing the square >>
<b>Lesson 16.6:</b> The Quadratic Formula	<b>BB.10</b> Solve a quadratic equation using the quadratic formula >> <b>BB.11</b> Using the discriminant >>

# Module 17

## Quadratic Functions

Textbook section	IXL skills
<b>Lesson 17.1:</b> Translating Quadratic Functions	
<b>Lesson 17.2:</b> Stretching, Compressing, and Reflecting Quadratic Functions	
<b>Lesson 17.3:</b> Combining Transformations of Quadratic Functions	<b>BB.3</b> Transformations of quadratic functions >>
<b>Lesson 17.4:</b> Characteristics of Quadratic Functions	<b>BB.1</b> Characteristics of quadratic functions >> <b>CC.1</b> Identify linear, quadratic, and exponential functions from graphs >>
<b>Lesson 17.5:</b> Solving Quadratic Equations Graphically	
<b>Lesson 17.6:</b> Solving Systems of Linear and Quadratic Equations	<b>BB.13</b> Systems of linear and quadratic equations >>
<b>Lesson 17.7:</b> Comparing Linear, Quadratic, and Exponential Models	

# Module 18

## Piecewise and Absolute Value Functions

Textbook section	IXL skills
<b>Lesson 18.1:</b> Piecewise Functions	
<b>Lesson 18.2:</b> Absolute Value Functions	<b>DD.2</b> Graph an absolute value function >> <b>DD.3</b> Domain and range of absolute value functions: graphs >>
<b>Lesson 18.3:</b> Transforming Absolute Value Functions	<b>DD.5</b> Transformations of absolute value functions >>
<b>Lesson 18.4:</b> Solving Absolute-Value Equations and Inequalities	<b>K.13</b> Write compound inequalities from graphs >> <b>L.1</b> Solve absolute value equations >> <b>L.2</b> Graph solutions to absolute value equations >> <b>L.3</b> Solve absolute value inequalities >> <b>L.4</b> Graph solutions to absolute value inequalities >>

# Module 19

## Square Root and Cube Root Functions

Textbook section	IXL skills
<b>Lesson 19.1:</b> Square Root Functions	
<b>Lesson 19.2:</b> Transforming Square Root Functions	
<b>Lesson 19.3:</b> Cube Root Functions	
<b>Lesson 19.4:</b> Transforming Cube Root Functions	

# Appendix

## Appendix

Textbook section	IXL skills
<b>Lesson A.1:</b> The Pythagorean Theorem	<b>Q.1</b> <a href="#">Pythagorean Theorem &gt;&gt;</a>
<b>Lesson A.2:</b> Converse of the Pythagorean Theorem	<b>Q.2</b> <a href="#">Converse of the Pythagorean theorem &gt;&gt;</a>
<b>Lesson A.3:</b> Distance Between Two Points	