



# IXL Skill Alignment

Algebra 1 alignment for Eureka Math Common Core Curriculum



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# Module 1

## Relationships Between Quantities and Reasoning with Equations and Their Graphs

Textbook section	IXL skills
<b>Topic A:</b> Introduction to Functions Studied this Year - Graphing Stories	1. Interpret the graph of a function: word problems STU
<b>Topic B:</b> The Structure of Expressions	1. Polynomial vocabulary MTT 2. Add and subtract polynomials 5EK 3. Multiply a polynomial by a monomial G2G 4. Multiply two binomials M7Q 5. Multiply two binomials: special cases 9JN 6. Multiply polynomials 58A  <i>Also consider</i> <ul style="list-style-type: none"> <li>• Distributive property BHL</li> <li>• Simplify variable expressions using properties HHR</li> <li>• Identify equivalent linear expressions 62A</li> <li>• Multiplication and division with exponents HPK</li> </ul>
<b>Topic C:</b> Solving Equations and Inequalities	1. Rearrange multi-variable equations WSJ 2. Solve advanced linear equations 28N 3. Solve equations with variables on both sides 7S7 4. Solve equations: complete the solution EVP 5. Solve one-step linear inequalities EEX 6. Graph solutions to one-step linear inequalities E2Z 7. Solve two-step linear inequalities NPZ 8. Graph solutions to two-step linear inequalities XVM 9. Solve advanced linear inequalities 9K8 10. Graph solutions to advanced linear inequalities 5GC 11. Graph compound inequalities BQX

12. Write compound inequalities from graphs 6UV
13. Solve compound inequalities GXA
14. Graph solutions to compound inequalities LHX
15. Graph a two-variable linear inequality HHP
16. Solve systems of linear inequalities by graphing SGH
17. Solve a system of equations by graphing TSS
18. Solve a system of equations by graphing: word problems BVB
19. Solve a system of equations using elimination A48
20. Solve a quadratic equation using the zero product property TNM

*Also consider*

- Properties of equality H8Q
- Does  $x$  satisfy the equation? JPC
- Which  $x$  satisfies an equation? YTT
- Create equations with no solutions or infinitely many solutions PUK
- Does  $(x, y)$  satisfy the inequality? N9L
- Is  $(x, y)$  a solution to the system of inequalities? VFC
- Solve a system of equations using substitution 8P9
- Solve a system of equations using elimination: word problems NHR

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**Topic D:** Creating Equations to Solve Problems

*Also consider*

- Consecutive integer problems HDF

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**Checkpoint opportunity**

1. Checkpoint: Polynomial operations 2B7
  2. Checkpoint: Solve linear equations and inequalities VYL
  3. Checkpoint: Systems of equations and inequalities LQW
  4. Checkpoint: Problem solving with equations and inequalities QZQ
- *Coming soon:* Checkpoint: Represent constraints
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# Module 2

## Descriptive Statistics

Textbook section	IXL skills
<b>Topic A:</b> Shapes and Centers of Distributions	1. Box plots YE9
<b>Topic B:</b> Describing Variability and Comparing Distributions	1. Variance and standard deviation HX5  <i>Also consider</i> <ul style="list-style-type: none"> <li>Calculate quartiles and interquartile range 8H9</li> <li>Identify an outlier 87L</li> </ul>
<b>Topic C:</b> Categorical Data on Two Variables	
<b>Topic D:</b> Numerical Data on Two Variables	1. Match correlation coefficients to scatter plots FQ7 2. Calculate correlation coefficients E8T 3. Find the equation of a regression line WJC 4. Interpret regression lines SEQ 5. Analyze a regression line of a data set 8D8  <i>Also consider</i> <ul style="list-style-type: none"> <li>Interpret a scatter plot 8BS</li> </ul>
<b>Checkpoint opportunity</b>	1. Checkpoint: Line plots, histograms, and box plots UVL <ul style="list-style-type: none"> <li><i>Coming soon:</i> Checkpoint: Compare data sets</li> <li><i>Coming soon:</i> Checkpoint: Two-way frequency tables</li> </ul>

# Module 3

## Linear and Exponential Functions

### Textbook section

### IXL skills

#### Topic A: Linear and Exponential Sequences

1. Identify arithmetic and geometric sequences X76
2. Evaluate variable expressions for number sequences PMN
3. Write variable expressions for arithmetic sequences 5VF
4. Exponential growth and decay: word problems UKG

#### *Also consider*

- Arithmetic sequences ALG
- Geometric sequences HLJ

#### Topic B: Functions and Their Graphs

1. Relations: convert between tables, graphs, mappings, and lists of points RBG
2. Evaluate a function R96
3. Evaluate a function: plug in an expression VNZ
4. Complete a function table from an equation Z73
5. Interpret the graph of a function: word problems STU

#### *Also consider*

- Domain and range of relations 2CG
- Identify functions VLL

#### Topic C: Transformations of Functions

1. Complete a function table: absolute value functions 2DH
2. Graph an absolute value function TD2
3. Transformations of absolute value functions 9TC

#### *Also consider*

- Domain and range of absolute value functions: graphs NV7

#### Topic D: Using Functions and Graphs to Solve Problems

**Checkpoint opportunity**

1. Checkpoint: Sequences 5W7
  2. Checkpoint: Function concepts HWA
    - *Coming soon:* Checkpoint: Linear and exponential functions
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## Module 4

### Polynomial and Quadratic Expressions, Equations, and Functions

#### Textbook section

#### IXL skills

**Topic A:** Quadratic Expressions, Equations, Functions, and Their Connection to Rectangles

1. Factor out a monomial JZL
2. Factor quadratics with leading coefficient 1 S9P
3. Factor quadratics with other leading coefficients 7ED
4. Factor quadratics: special cases 56E
5. Solve a quadratic equation using the zero product property TNM
6. Solve a quadratic equation by factoring CSS

*Also consider*

- GCF of monomials ZZU
- Solve a quadratic equation using square roots ERF
- Match quadratic functions and graphs AU8

**Topic B:** Using Different Forms for Quadratic Functions

1. Characteristics of quadratic functions: graphs HW8
2. Graph quadratic functions in vertex form C7T
3. Solve a quadratic equation by completing the square XCL
4. Solve a quadratic equation using the quadratic formula XCF
5. Using the discriminant SMF

*Also consider*

- Complete the square RD2

**Topic C:** Function Transformations and Modeling

1. Transformations of quadratic functions 6YS
2. Transformations of absolute value functions 9TC

*Also consider*

- Transformations of linear functions C8G
- Domain and range of radical functions: graphs UXG

**Checkpoint opportunity****Module 4**

1. Checkpoint: Quadratic equations NXG

**Modules 1-4**

2. Checkpoint: Function transformations QKX

3. Checkpoint: Write and interpret equivalent expressions YJJ

- *Coming soon:* Checkpoint: Solve equations using graphs and tables
  - *Coming soon:* Checkpoint: Average rate of change
  - *Coming soon:* Checkpoint: Features of functions
  - *Coming soon:* Checkpoint: Function graphs
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# Module 5

## A Synthesis of Modeling with Equations and Functions

Textbook section	IXL skills
<p><b>Topic A:</b> Elements of Modeling</p>	<ol style="list-style-type: none"> <li>Slope-intercept form: write an equation from a word problem <small>HWM</small></li> <li>Write linear functions: word problems <small>9RQ</small></li> <li>Identify linear, quadratic, and exponential functions from tables <small>SP5</small></li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Identify linear, quadratic, and exponential functions from graphs <small>DHB</small></li> </ul>
<p><b>Topic B:</b> Completing the Modeling Cycle</p>	<ol style="list-style-type: none"> <li>Exponential growth and decay: word problems <small>UKG</small></li> <li>Write linear, quadratic, and exponential functions <small>AFA</small></li> <li>Find the equation of a regression line <small>WJC</small></li> <li>Interpret regression lines <small>SEQ</small></li> <li>Analyze a regression line of a data set <small>8D8</small></li> </ol>
<p><b>Checkpoint opportunity</b></p>	<ul style="list-style-type: none"> <li><i>Coming soon:</i> Checkpoint: Quantitative reasoning</li> <li><i>Coming soon:</i> Checkpoint: Build functions</li> <li><i>Coming soon:</i> Checkpoint: Linear models</li> </ul>