



# IXL Skill Alignment

Integrated Mathematics 1 alignment for Big Ideas Math



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# Chapter 1

## Solving Linear Equations

Textbook section	IXL skills
<b>Lesson 1.1:</b> Solving Simple Equations	<ol style="list-style-type: none"><li>1. Properties of equality H8Q</li><li>2. Solve one-step linear equations TXJ</li></ol>
<b>Lesson 1.2:</b> Solving Multi-Step Equations	<ol style="list-style-type: none"><li>1. Solve two-step linear equations QAK</li><li>2. Solve advanced linear equations 28N</li><li>3. Solve linear equations: word problems UFG</li></ol>
<b>Lesson 1.3:</b> Solving Equations with Variables on Both Sides	<ol style="list-style-type: none"><li>1. Solve equations with variables on both sides 7S7</li><li>2. Solve equations: complete the solution EVP</li><li>3. Solve linear equations: mixed review DN6</li></ol>
<b>Lesson 1.4:</b> Solving Absolute Value Equations	<ol style="list-style-type: none"><li>1. Solve absolute value equations 9LF</li><li>2. Graph solutions to absolute value equations KXA</li></ol>
<b>Lesson 1.5:</b> Rewriting Equations and Formulas	<ol style="list-style-type: none"><li>1. Rearrange multi-variable equations WSJ</li></ol>

# Chapter 2

## Solving Linear Inequalities

Textbook section	IXL skills
<b>Lesson 2.1:</b> Writing and Graphing Inequalities	<ol style="list-style-type: none"> <li>1. Graph inequalities H68</li> <li>2. Write inequalities from graphs SEK</li> <li>3. Identify solutions to inequalities 5UE</li> </ol>
<b>Lesson 2.2:</b> Solving Inequalities Using Addition or Subtraction	<ol style="list-style-type: none"> <li>1. Solve one-step linear inequalities: addition and subtraction RZV</li> </ol>
<b>Lesson 2.3:</b> Solving Inequalities Using Multiplication or Division	<ol style="list-style-type: none"> <li>1. Solve one-step linear inequalities: multiplication and division BRJ</li> <li>2. Solve one-step linear inequalities EEX</li> <li>3. Graph solutions to one-step linear inequalities E2Z</li> </ol>
<b>Lesson 2.4:</b> Solving Multi-Step Inequalities	<p><b>Two-step linear inequalities</b></p> <ol style="list-style-type: none"> <li>1. Solve two-step linear inequalities NPZ</li> <li>2. Graph solutions to two-step linear inequalities XVM</li> </ol> <p><b>Advanced linear inequalities</b></p> <ol style="list-style-type: none"> <li>3. Solve advanced linear inequalities 9K8</li> <li>4. Graph solutions to advanced linear inequalities 5GC</li> </ol>
<b>Lesson 2.5:</b> Solving Compound Inequalities	<ol style="list-style-type: none"> <li>1. Graph compound inequalities BQX</li> <li>2. Write compound inequalities from graphs 6UV</li> <li>3. Solve compound inequalities GXA</li> <li>4. Graph solutions to compound inequalities LHX</li> </ol>
<b>Lesson 2.6:</b> Solving Absolute Value Inequalities	<ol style="list-style-type: none"> <li>1. Solve absolute value inequalities HXH</li> <li>2. Graph solutions to absolute value inequalities NE9</li> </ol>

# Chapter 3

## Graphing Linear Functions

Textbook section	IXL skills
<b>Lesson 3.1:</b> Functions	<p><b>Relations</b></p> <ol style="list-style-type: none"> <li>Relations: convert between tables, graphs, mappings, and lists of points RBG</li> <li>Domain and range of relations 2CG</li> </ol> <p><b>Independent and dependent variables</b></p> <ol style="list-style-type: none"> <li>Identify independent and dependent variables N55</li> </ol> <p><b>Identify functions</b></p> <ol style="list-style-type: none"> <li>Identify functions VLL</li> <li>Identify functions: vertical line test HLX</li> </ol>
<b>Lesson 3.2:</b> Linear Functions	<ol style="list-style-type: none"> <li>Identify linear functions from graphs and equations VMQ</li> <li>Identify linear functions from tables F5G</li> </ol>
<b>Lesson 3.3:</b> Function Notation	<ol style="list-style-type: none"> <li>Evaluate a function R96</li> <li>Interpret the graph of a function: word problems STU</li> <li>Interpret functions using everyday language U98</li> </ol>
<b>Lesson 3.4:</b> Graphing Linear Equations in Standard Form	<p><b>Standard form</b></p> <ol style="list-style-type: none"> <li>Standard form: find x- and y-intercepts 8SN</li> <li>Standard form: graph an equation U6U</li> </ol> <p><b>Horizontal and vertical lines</b></p> <ol style="list-style-type: none"> <li>Equations of horizontal and vertical lines K8H</li> <li>Graph a horizontal or vertical line BTK</li> </ol>
<b>Lesson 3.5:</b> Graphing Linear Equations in Slope-Intercept Form	<p><b>Find the slope</b></p> <ol style="list-style-type: none"> <li>Find the slope of a graph E7D</li> <li>Find the slope from two points MD5</li> </ol>

**Slope-intercept form**

- 3. Slope-intercept form: find the slope and y-intercept R5T
- 4. Slope-intercept form: graph an equation UWB

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**Lesson 3.6:** Transformations of Graphs of Linear Functions

- 1. Transformations of linear functions C8G
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# Chapter 4

## Writing Linear Functions

Textbook section	IXL skills
<b>Lesson 4.1:</b> Writing Equations in Slope-Intercept Form	<ol style="list-style-type: none"> <li>Slope-intercept form: write an equation from a graph 9GW</li> <li>Slope-intercept form: write an equation A42</li> <li>Slope-intercept form: write an equation from a word problem HWM</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>Slope-intercept form: write an equation from a table SSE</li> </ul>
<b>Lesson 4.2:</b> Writing Equations in Point-Slope Form	<ol style="list-style-type: none"> <li>Point-slope form: write an equation PPE</li> <li>Point-slope form: write an equation from a graph LBX</li> </ol>
<b>Lesson 4.3:</b> Writing Equations of Parallel and Perpendicular Lines	<ol style="list-style-type: none"> <li>Slopes of parallel and perpendicular lines ADB</li> <li>Write an equation for a parallel or perpendicular line 5SH</li> </ol>
<b>Lesson 4.4:</b> Scatter Plots and Lines of Fit	<ol style="list-style-type: none"> <li>Interpret a scatter plot 8BS</li> <li>Scatter plots: line of best fit Y2S</li> </ol>
<b>Lesson 4.5:</b> Analyzing Lines of Fit	<p><b>Correlation coefficients</b></p> <ol style="list-style-type: none"> <li>Match correlation coefficients to scatter plots FQ7</li> <li>Calculate correlation coefficients E8T</li> </ol> <p><b>Regression lines</b></p> <ol style="list-style-type: none"> <li>Find the equation of a regression line WJC</li> <li>Interpret regression lines SEQ</li> <li>Analyze a regression line of a data set 8D8</li> </ol>
<b>Lesson 4.6:</b> Arithmetic Sequences	<ol style="list-style-type: none"> <li>Arithmetic sequences ALG</li> <li>Write variable expressions for arithmetic sequences 5VF</li> </ol>

# Chapter 5

## Solving Systems of Linear Equations

Textbook section	IXL skills
<b>Lesson 5.1:</b> Solving a System of Equations by Graphing	<ol style="list-style-type: none"> <li>1. Is <math>(x, y)</math> a solution to the system of equations? LRL</li> <li>2. Solve a system of equations by graphing TSS</li> <li>3. Solve a system of equations by graphing: word problems BVB</li> </ol>
<b>Lesson 5.2:</b> Solving a System of Linear Equations by Substitution	<ol style="list-style-type: none"> <li>1. Solve a system of equations using substitution 8P9</li> <li>2. Solve a system of equations using substitution: word problems US9</li> </ol>
<b>Lesson 5.3:</b> Solving a System of Linear Equations by Elimination	<ol style="list-style-type: none"> <li>1. Solve a system of equations using elimination A48</li> <li>2. Solve a system of equations using elimination: word problems NHR</li> </ol>
<b>Lesson 5.4:</b> Solving Special Systems of Linear Equations	<ol style="list-style-type: none"> <li>1. Find the number of solutions to a system of equations by graphing HJW</li> <li>2. Find the number of solutions to a system of equations ACN</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Classify a system of equations by graphing T2D</li> <li>• Classify a system of equations LTA</li> </ul>
<b>Lesson 5.5:</b> Solving Equations by Graphing	<ol style="list-style-type: none"> <li>1. Solve a system of equations using any method HLV</li> <li>2. Solve a system of equations using any method: word problems GDQ</li> </ol>
<b>Lesson 5.6:</b> Graphing Linear Inequalities in Two Variables	<ol style="list-style-type: none"> <li>1. Does <math>(x, y)</math> satisfy the inequality? N9L</li> <li>2. Graph a two-variable linear inequality HHP</li> <li>3. Linear inequalities: word problems ZAY</li> </ol>



**Lesson 5.7:** Systems of Linear Inequalities

1. Is  $(x, y)$  a solution to the system of inequalities? VFC
  2. Solve systems of linear inequalities by graphing SGH
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# Chapter 6

## Exponential Functions and Sequences

Textbook section	IXL skills
<b>Lesson 6.1:</b> Exponential Functions	<ol style="list-style-type: none"> <li>Evaluate an exponential function D6H</li> <li>Match exponential functions and graphs 72J</li> </ol>
<b>Lesson 6.2:</b> Exponential Growth and Decay	<ol style="list-style-type: none"> <li>Exponential growth and decay: word problems UKG</li> </ol>
<b>Lesson 6.3:</b> Comparing Linear and Exponential Functions	<p><b>Identify linear and exponential functions</b></p> <ol style="list-style-type: none"> <li>Identify linear and exponential functions from graphs UEC</li> <li>Identify linear and exponential functions from tables LZF</li> </ol> <p><b>Rate of change</b></p> <ol style="list-style-type: none"> <li>Rate of change: tables PLA</li> <li>Rate of change: graphs BNH</li> </ol>
<b>Lesson 6.4:</b> Solving Exponential Equations	
<b>Lesson 6.5:</b> Geometric Sequences	<ol style="list-style-type: none"> <li>Identify arithmetic and geometric sequences X76</li> <li>Geometric sequences HLJ</li> <li>Evaluate variable expressions for number sequences PMN</li> <li>Write variable expressions for geometric sequences XPC</li> </ol>
<b>Lesson 6.6:</b> Recursively Defined Sequences	<p><b>Sequences</b></p> <ol style="list-style-type: none"> <li>Evaluate recursive formulas for sequences 9YD</li> <li>Identify a sequence as explicit or recursive Y9B</li> </ol> <p><b>Write a formula</b></p> <ol style="list-style-type: none"> <li>Write a formula for a recursive sequence KP9</li> </ol> <p><b>Convert between recursive and explicit formulas</b></p> <ol style="list-style-type: none"> <li>Convert a recursive formula to an explicit formula ZBQ</li> </ol>



5. Convert an explicit formula to a recursive formula 42Y

**Review**

6. Number sequences: mixed review FEL

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# Chapter 7

## Data Analysis and Displays

Textbook section	IXL skills
<b>Lesson 7.1:</b> Measures of Center and Variation	<ol style="list-style-type: none"><li>1. Mean, median, mode, and range MHB</li><li>2. Identify an outlier 87L</li><li>3. Identify an outlier and describe the effect of removing it XGC</li><li>4. Variance and standard deviation HX5</li></ol>
<b>Lesson 7.2:</b> Box-and-Whisker Plots	<ol style="list-style-type: none"><li>1. Calculate quartiles and interquartile range 8H9</li><li>2. Box plots YE9</li></ol>
<b>Lesson 7.3:</b> Shapes of Distributions	
<b>Lesson 7.4:</b> Two-Way Tables	
<b>Lesson 7.5:</b> Choosing a Data Display	<ol style="list-style-type: none"><li>1. Create line plots N2E</li><li>2. Create histograms WZU</li><li>3. Create bar graphs, line graphs, and histograms EF6</li></ol>

# Chapter 8

## Basics of Geometry

Textbook section	IXL skills
<b>Lesson 8.1:</b> Points, Lines, and Planes	1. Lines, line segments, and rays XFC  <i>Also consider</i> <ul style="list-style-type: none"> <li>Properties of planes, lines, and points SVU</li> <li>Describe intersections in a plane BD6</li> </ul>
<b>Lesson 8.2:</b> Measuring and Constructing Segments	1. Additive property of length 7RA 2. Congruent line segments 6W6  <i>Also consider</i> <ul style="list-style-type: none"> <li>Lengths of segments on number lines JSD</li> </ul>
<b>Lesson 8.3:</b> Using Midpoint and Distance Formulas	<b>Midpoints</b> <ol style="list-style-type: none"> <li>Midpoints 7RH</li> <li>Midpoint formula: find the midpoint 2YG</li> <li>Midpoint formula: find the endpoint EUW</li> </ol> <b>Distance</b> <ol style="list-style-type: none"> <li>Distance formula 59F</li> </ol>
<b>Lesson 8.4:</b> Perimeter and Area in the Coordinate Plane	<b>Vocabulary</b> <ol style="list-style-type: none"> <li>Polygon vocabulary KHQ</li> </ol> <b>Area and perimeter</b> <ol style="list-style-type: none"> <li>Area and perimeter in the coordinate plane I QWZ</li> <li>Area and perimeter in the coordinate plane II MHQ</li> </ol> <b>Constructions inscribed in a circle</b> <ol style="list-style-type: none"> <li>Construct an equilateral triangle inscribed in a circle RBF</li> <li>Construct a regular hexagon inscribed in a circle MCM</li> </ol>

**Lesson 8.5:** Measuring and Constructing Angles**Measure angles**

1. Angle vocabulary 9U2
2. Angle measures BCQ
3. Angle bisectors 68E

**Construct angles**

4. Construct an angle bisector FHL
  5. Construct a congruent angle F7V
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**Lesson 8.6:** Describing Pairs of Angles

1. Identify complementary, supplementary, vertical, adjacent, and congruent angles 7P7
  2. Find measures of complementary, supplementary, vertical, and adjacent angles VZU
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# Chapter 9

## Reasoning and Proofs

Textbook section	IXL skills
<b>Lesson 9.1:</b> Conditional Statements	<b>Statements</b> <ol style="list-style-type: none"><li>1. Identify hypotheses and conclusions 7FW</li><li>2. Conditionals VU9</li><li>3. Negations VBY</li><li>4. Converses, inverses, and contrapositives N5P</li><li>5. Biconditionals Q6E</li></ol> <b>Truth tables</b> <ol style="list-style-type: none"><li>6. Truth tables 6FJ</li><li>7. Truth values JUU</li></ol>
<b>Lesson 9.2:</b> Inductive and Deductive Reasoning	<ol style="list-style-type: none"><li>1. Counterexamples 2GJ</li></ol>
<b>Lesson 9.3:</b> Postulates and Diagrams	
<b>Lesson 9.4:</b> Proving Statements about Segments and Angles	<ol style="list-style-type: none"><li>1. Proofs involving angles HV9</li></ol>
<b>Lesson 9.5:</b> Proving Geometric Relationships	

# Chapter 10

## Parallel and Perpendicular Lines

Textbook section	IXL skills
<b>Lesson 10.1:</b> Pairs of Lines and Angles	<ol style="list-style-type: none"><li>1. Identify parallel, intersecting, and skew lines and planes QZD</li><li>2. Transversals: name angle pairs V85</li></ol>
<b>Lesson 10.2:</b> Parallel Lines and Transversals	<ol style="list-style-type: none"><li>1. Transversals of parallel lines: find angle measures WB9</li></ol>
<b>Lesson 10.3:</b> Proofs with Parallel Lines	<ol style="list-style-type: none"><li>1. Construct parallel lines 6EB</li><li>2. Proofs involving parallel lines I CUV</li><li>3. Proofs involving parallel lines II 5U8</li></ol>
<b>Lesson 10.4:</b> Proofs with Perpendicular Lines	<ol style="list-style-type: none"><li>1. Construct a perpendicular line BZR</li><li>2. Perpendicular Bisector Theorem BKS</li></ol>
<b>Lesson 10.5:</b> Using Parallel and Perpendicular Lines	<ol style="list-style-type: none"><li>1. Find the distance between a point and a line GWC</li><li>2. Find the distance between two parallel lines A7B</li></ol>

# Chapter 11

## Transformations

### Textbook section

#### Lesson 11.1: Translations

### IXL skills

#### Vector components

1. Find the component form of a vector 2UV

#### Graph the image

2. Translations: graph the image 7AC

#### Find the coordinates

3. Translations: find the coordinates F8U

#### Write the rule

4. Translations: write the rule 9PR

#### Lesson 11.2: Reflections

#### Reflections

1. Reflections: graph the image SM9
2. Reflections: find the coordinates SVY

#### Lines of symmetry

3. Line symmetry WBX
4. Draw lines of symmetry JU7
5. Count lines of symmetry M7U

#### Lesson 11.3: Rotations

#### Rotate about a point

1. Rotate polygons about a point XM7

#### Graph the image

2. Rotations: graph the image 6SD

#### Find the coordinates

3. Rotations: find the coordinates ZX5
4. Rotational symmetry ERP

#### Lesson 11.4: Congruence and Transformations

1. Classify congruence transformations CXT
2. Sequences of congruence transformations: graph the image WHW
3. Transformations that carry a polygon onto itself RJW





4. Congruence transformations: mixed review XQ7

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# Chapter 12

## Congruent Triangles

Textbook section	IXL skills
<b>Lesson 12.1:</b> Angles of Triangles	<ol style="list-style-type: none"> <li>1. Classify triangles TNN</li> <li>2. Triangle Angle-Sum Theorem UBU</li> <li>3. Exterior Angle Theorem TGK</li> </ol>
<b>Lesson 12.2:</b> Congruent Polygons	<ol style="list-style-type: none"> <li>1. Congruence statements and corresponding parts CYL</li> <li>2. Solve problems involving corresponding parts WYB</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• Identify congruent figures HU9</li> </ul>
<b>Lesson 12.3:</b> Proving Triangle Congruence by SAS	
<b>Lesson 12.4:</b> Equilateral and Isosceles Triangles	<ol style="list-style-type: none"> <li>1. Congruency in isosceles and equilateral triangles HPR</li> <li>2. Proofs involving isosceles triangles V45</li> </ol>
<b>Lesson 12.5:</b> Proving Triangle Congruence by SSS	<ol style="list-style-type: none"> <li>1. SSS and SAS Theorems 48Q</li> <li>2. Proving triangles congruent by SSS and SAS VVZ</li> <li>3. Hypotenuse-Leg Theorem VQJ</li> </ol>
<b>Lesson 12.6:</b> Proving Triangle Congruence by ASA and AAS	<ol style="list-style-type: none"> <li>1. ASA and AAS Theorems N94</li> <li>2. Proving triangles congruent by ASA and AAS 23Z</li> </ol>
<b>Lesson 12.7:</b> Using Congruent Triangles	<ol style="list-style-type: none"> <li>1. Proving triangles congruent by SSS, SAS, ASA, and AAS SZL</li> <li>2. Proofs involving corresponding parts of congruent triangles AKL</li> <li>3. Proofs involving triangles I G78</li> </ol> <p><i>Also consider</i></p> <ul style="list-style-type: none"> <li>• SSS, SAS, ASA, and AAS Theorems LER</li> </ul>
<b>Lesson 12.8:</b> Coordinate Proofs	<ol style="list-style-type: none"> <li>1. SSS Theorem in the coordinate plane C5G</li> </ol>