



IXL Skill Alignment

Course 3 alignment for Big Ideas Math 2019 Virginia



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Chapter 1

Equations and Inequalities

Textbook section

IXL skills

Section 1.1: Algebraic Expressions

Evaluate expressions

1. Evaluate one-variable expressions V77
2. Evaluate multi-variable expressions QZT

Write expressions

3. Write variable expressions: word problems MEC

Simplify expressions

4. Multiply using the distributive property U7T
5. Write equivalent expressions using properties QFJ
6. Add and subtract linear expressions QCY

Also consider

- Evaluate radical expressions D8J

Section 1.2: Solving Simple Equations

1. Which x satisfies an equation? BVQ
2. Properties of equality 7WL
3. Solve one-step equations 5J4

Section 1.3: Solving Multi-Step Equations

1. Solve two-step equations JXD
2. Solve multi-step equations 55K
3. Solve equations involving like terms Q2B
4. Solve one-step and two-step equations: word problems HCP

Section 1.4: Solving Equations with Variables on Both Sides

1. Solve equations with variables on both sides ZYL
2. Solve equations: mixed review HZZ
3. Solve equations: complete the solution PGH

Section 1.5: Rewriting Equations and Formulas

1. Convert between Celsius and Fahrenheit L9F



Section 1.6: Solving Multi-Step Inequalities

Two-step inequalities

1. Solve two-step inequalities N9D
2. Graph solutions to two-step inequalities WHT

Multi-step inequalities

3. Solve multi-step inequalities 6AZ
 4. Graph solutions to multi-step inequalities HKW
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Chapter 2

Transformations

| Textbook section | IXL skills |
|---|---|
| Section 2.1: Translations | <ol style="list-style-type: none"> Translations: graph the image XUS Translations: find the coordinates RUP <p><i>Also consider</i></p> <ul style="list-style-type: none"> Identify reflections, rotations, and translations UYL |
| Section 2.2: Reflections | <ol style="list-style-type: none"> Reflections over the x- and y-axes: graph the image 74Z Reflections over the x- and y-axes: find the coordinates 5UM <p><i>Also consider</i></p> <ul style="list-style-type: none"> Reflections: graph the image NBM Reflections: find the coordinates KUX |
| Section 2.3: Rotations | <ol style="list-style-type: none"> Rotations: graph the image AC9 Rotations: find the coordinates HHS <p><i>Also consider</i></p> <ul style="list-style-type: none"> Describe a sequence of transformations XPK |
| Section 2.4: Similar Figures | <ol style="list-style-type: none"> Similar and congruent figures U85 Side lengths and angle measures of similar triangles XED Side lengths and angle measures of similar figures 79Y |
| Section 2.5: Perimeters and Areas of Similar Figures | <ol style="list-style-type: none"> Perimeter and area: changes in scale URF |
| Section 2.6: Dilations | <ol style="list-style-type: none"> Dilations: graph the image 9T4 Dilations: find the coordinates UV9 Dilations: scale factor and classification 8NK |

Chapter 3

Angles and Polygons

| Textbook section | IXL skills |
|---|---|
| Section 3.1: Adjacent and Vertical Angles | 1. Identify complementary, supplementary, vertical, adjacent, and congruent angles <small>HGV</small> |
| Section 3.2: Complementary and Supplementary Angles | 2. Find measures of complementary, supplementary, vertical, and adjacent angles <small>R2B</small> |
| Section 3.3: Angles of Triangles | 1. Exterior Angle Theorem <small>FMP</small> 2. Find missing angles in triangles using ratios <small>59G</small> 3. Find missing angles in triangles <small>JFJ</small> |
| Section 3.4: Angles of Polygons | 1. Interior angles of polygons <small>JBP</small> |
| Section 3.5: Perimeters of Composite Figures | |
| Section 3.6: Areas of Composite Figures | 1. Area and perimeter of semicircles and quarter circles <small>2MP</small> |

Chapter 4

Graphing and Writing Linear Equations

| Textbook section | IXL skills |
|---|--|
| Section 4.1: Graphing Linear Equations | <ol style="list-style-type: none">1. Complete a table and graph a linear function DC2 |
| Section 4.2: Slope of a Line | <ol style="list-style-type: none">1. Find the slope of a graph D7M2. Find the slope from two points ZAC3. Graph a line using slope FSV |
| Section 4.3: Graphing Linear Equations in Slope-Intercept Form | <ol style="list-style-type: none">1. Slope-intercept form: find the slope and y-intercept U552. Graph a line from an equation in slope-intercept form W5E |
| Section 4.4: Writing Equations in Slope-Intercept Form | <ol style="list-style-type: none">1. Write a linear equation from a slope and y-intercept WHP2. Write a linear equation from a graph WHM3. Write a linear equation from two points 2R9 |

Chapter 5

Functions

| Textbook section | IXL skills |
|--|--|
| Section 5.1: Relations and Functions | <ol style="list-style-type: none"> 1. Identify functions <small>ELJ</small> |
| Section 5.2: Representations of Functions | <ol style="list-style-type: none"> 1. Evaluate a linear function <small>LVN</small> 2. Complete a table for a linear function <small>D9B</small> 3. Complete a table and graph a linear function <small>DC2</small> <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Identify independent and dependent variables <small>FSF</small> |
| Section 5.3: Domain and Range of a Function | <ol style="list-style-type: none"> 1. Domain and range of functions <small>JZD</small> |
| Section 5.4: Linear Functions | <ol style="list-style-type: none"> 1. Write a linear function from a table <small>UYU</small> 2. Write linear functions: word problems <small>YK6</small> 3. Compare linear functions: tables, graphs, and equations <small>N7D</small> <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Interpret points on the graph of a linear function <small>9E8</small> • Evaluate a linear function: word problems <small>DA6</small> |
| Section 5.5: Comparing Linear and Nonlinear Functions | <ol style="list-style-type: none"> 1. Identify linear and nonlinear functions: tables <small>VGS</small> 2. Identify linear and nonlinear functions: graphs and equations <small>XB8</small> |

Chapter 6

Percents

Textbook section

IXL skills

Section 6.1: The Percent Equation

Percents of numbers

1. Percents of numbers and money amounts ZGA
2. Percents of numbers: word problems JNT

Find percents

3. Find what percent one number is of another JMG
4. Find what percent one number is of another: word problems ARV

Percent equations

5. Solve percent equations UAN

Section 6.2: Percents of Increase and Decrease

1. Percent of change NYH
2. Percent of change: word problems YHP

Section 6.3: Discounts and Markups

1. Percent of a number: tax, discount, and more KZZ
2. Find the percent: tax, discount, and more KCF

Section 6.4: Simple Interest

1. Simple interest YAT

Chapter 7

Real Numbers and the Pythagorean Theorem

| Textbook section | IXL skills |
|---|--|
| Section 7.1: Finding Square Roots | <ol style="list-style-type: none"> 1. Square roots of perfect squares 9RS 2. Positive and negative square roots 8TF 3. Relationship between squares and square roots 8W2 4. Solve equations using square roots NNA |
| Section 7.2: The Pythagorean Theorem | <ol style="list-style-type: none"> 1. Pythagorean theorem: find the length of the hypotenuse 7ZL 2. Pythagorean theorem: find the missing leg length Y9C 3. Pythagorean theorem: word problems 87U 4. Pythagorean theorem: find the perimeter VGE |
| Section 7.3: Approximating Square Roots | <p>Classify numbers</p> <ol style="list-style-type: none"> 1. Classify numbers VR7 2. Identify rational and irrational numbers NV6 <p>Estimate square roots</p> <ol style="list-style-type: none"> 3. Estimate positive and negative square roots 96T |
| Section 7.4: Using the Pythagorean Theorem | <ol style="list-style-type: none"> 1. Converse of the Pythagorean theorem: is it a right triangle? EQZ 2. Find the distance between two points ZBP |

Chapter 8

Three-Dimensional Figures

| Textbook section | IXL skills |
|---|---|
| Section 8.1: Three-Dimensional Figures | <ol style="list-style-type: none">1. Parts of three-dimensional figures SVH2. Nets of three-dimensional figures V8B3. Front, side, and top view R6T |
| Section 8.2: Surface Areas of Rectangular Prisms | <ol style="list-style-type: none">1. Surface area of cubes, prisms, and pyramids ZT6 |
| Section 8.3: Surface Areas of Pyramids | <ol style="list-style-type: none">1. Surface area of rectangular pyramids 2DG |
| Section 8.4: Surface Areas of Cones | <ol style="list-style-type: none">1. Surface area of cones 5E6 |
| Section 8.5: Volumes of Rectangular Prisms | <ol style="list-style-type: none">1. Volume of cubes, prisms, and pyramids JUB |
| Section 8.6: Volumes of Pyramids | <ol style="list-style-type: none">1. Volume of rectangular pyramids TX9 |
| Section 8.7: Volumes of Cones | <ol style="list-style-type: none">1. Volume of cones YXR |

Chapter 9

Data Analysis and Probability

| Textbook section | IXL skills |
|--|---|
| Section 9.1: Box-and-Whisker Plots | 1. Box plots YVZ |
| Section 9.2: Scatter Plots | 1. Outliers in scatter plots RP8 2. Identify trends with scatter plots GZE 3. Create scatter plots AVL |
| Section 9.3: Lines of Fit | 1. Make predictions with scatter plots CM7 2. Scatter plots: line of best fit ZQ6 |
| Section 9.4: Probability | 1. Probability of simple events 5ZY 2. Probability of opposite, mutually exclusive, and overlapping events DCL |
| Section 9.5: Compound Events | 1. Compound events: find the number of outcomes P5R 2. Compound events: find the number of sums HCX 3. Counting principle CNQ |
| Section 9.6: Independent and Dependent Events | 1. Identify independent and dependent events SRF 2. Probability of independent and dependent events SAS |

Chapter 10

Exponents and Scientific Notation

| Textbook section | IXL skills |
|--|---|
| Section 10.1: Exponents | <p>Understand exponents</p> <ol style="list-style-type: none"> Understanding exponents V F V <p>Evaluate exponents</p> <ol style="list-style-type: none"> Evaluate exponents E Y R Exponents with negative bases Z Q C Exponents with decimal and fractional bases 8 C T <p>Evaluate expressions</p> <ol style="list-style-type: none"> Evaluate numerical expressions involving integers Y 6 W |
| Section 10.2: Product of Powers Property | <ol style="list-style-type: none"> Multiplication with exponents E Q Y Power rule A E Q |
| Section 10.3: Quotient of Powers Property | <ol style="list-style-type: none"> Division with exponents M 2 C <p><i>Also consider</i></p> <ul style="list-style-type: none"> Multiplication and division with exponents L 2 J Identify equivalent expressions involving exponents I V L M Identify equivalent expressions involving exponents II Q D M |
| Section 10.4: Reading Scientific Notation | <ol style="list-style-type: none"> Compare numbers written in scientific notation R H T |
| Section 10.5: Writing Scientific Notation | <ol style="list-style-type: none"> Convert between standard and scientific notation H 8 A |