Math 6, 4ed — Lesson Plan Overview

| Day | Lesson | Student Edition Pages | Teacher Edition Pages | Teacher Resources &  Additional Materials | Topics, Skills & Biblical Worldview Shaping |
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| Chapter 1: Number Systems | | | | | |
| 1 | 1 | 1–3 | 1–3b | Additional Materials   * Bible | Topic: Whole Number Place Value  Skills: expressing numbers in multiple forms, rounding numbers, comparing numbers  BWS: Knowledge |
| 2 | 2 | 4–5 | 4–5b |  | Topic: Adding Whole Numbers  Skills: applying addition strategies, adding whole numbers, estimating a sum |
| 3 | 3 | 6–8 | 6–8a | Assessments   * Chapter 1 Quiz 1 | Topic: Subtracting Whole Numbers  Skills: subtracting whole numbers, estimating a difference by rounding |
| 4 | 4 | 9–11 | 9–11a | Teacher Resources   * 1 Decimal Number Lines   Additional Materials   * Bible | Topic: Decimal Place Value  Skills: expressing decimals in multiple forms,  comparing and ordering decimals, rounding decimals  BWS: Knowledge |
| 5 | 5 | 12–13 | 12–13b |  | Topic: Adding & Subtracting Decimals  Skills: applying addition properties to decimals, adding and subtracting decimals, estimating sums and differences |
| 6 | 6 | 14–15 | 14–15b | Teacher Resources   * 2 Part-Whole Models   Assessments   * Chapter 1 Quiz 2 | Topic: Solving Problems  Skills: using a part-whole model to solve word problems, solving multistep word problems |
| 7 | 7 | 16–17 | 16–17b | Teacher Resources   * 3 Positive & Negative Number Line | Topic: Positive & Negative Numbers  Skills: comparing and ordering positive and negative numbers, adding positive and negative numbers using a number line  BWS: Knowledge |
| 8 | 8 | 18–19 | 18–19b | Teacher Resources   * 4 Roman Numerals * 5 Roman Numeral Sequences | Topic: Roman Numerals  Skills: reading and writing Roman numerals,  completing a sequence of Roman numerals |
| 9 | 9 | 20–21 | 20–21b | Teacher Resources   * 6 Number Patterns * 7 Patterns | Topic: Patterns  Skills: using logic to identify number patterns, using a pattern to solve a problem  BWS: Knowledge |
| 10 | 10 | 22–23 | 22–23b | Teacher Resources   * 2 Part-Whole Models | Topic: Chapter Review |
| 11 | 11 | 24–26 | 24–26 | Teacher Resources   * 8 Cumulative Review Answer Sheet | Topic: Test & Cumulative Review |
| Chapter 2: Multiplying by a Whole Number | | | | | |
| 12 | 12 | 27–29 | 27–29b | Teacher Resources   * 9 Applying Properties   Additional Materials   * colored pencils: red and green | Topic: Multiplication  Skills: identifying the greatest common factor and the least common multiple, applying properties of multiplication to numbers and variables  BWS: Modeling |
| 13 | 13 | 30–31 | 30–31b |  | Topic: Multiples of 10  Skills: multiplying multiples of 10, applying the Distributive Property of Multiplication over Addition |
| 14 | 14 | 32–33 | 32–33b | Teacher Resources   * 10 Powers of 10   Additional Materials   * graph paper   Assessments   * Chapter 2 Quiz 1 | Topic: Exponents  Skills: writing the values for 1² to 12², writing the expanded form of a number using exponents  BWS: Modeling |
| 15 | 15 | 34–35 | 34–35b |  | Topic: 1- & 2-Digit Multipliers  Skills: multiplying a whole number by a 1- or 2-digit multiplier, estimating a product by rounding |
| 16 | 16 | 36–37 | 36–37b |  | Topic: Multiplying Decimals  Skills: multiplying a decimal by a 1- or 2-digit  multiplier, solving decimal word problems  BWS: Modeling |
| 17 | 17 | 38–39 | 38–39b | Assessments   * Chapter 2 Quiz 2 | Topic: 3-Digit Multipliers  Skills: multiplying by a 3-digit multiplier, applying strategies to multiply mentally |
| 18 | 18 | 40–41 | 40–41b | Teacher Resources   * 11 Graph Paper * 12 Perfect Squares & Square Roots   Additional Materials   * calculators (optional) | Topic: Squares & Square Roots  Skills: writing the first 20 perfect squares, writing the first 20 square roots, using the Pythagorean theorem  BWS: Modeling |
| 19 | 19 | 42–43 | 42–43b | Teacher Resources   * 13 Pictures of Multiplication | Topic: Chapter Review |
| 20 | 20 | 44–46 | 44–46 | Teacher Resources   * 8 Cumulative Review Answer Sheet | Topic: Test & Cumulative Review |

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| Chapter 3: Dividing by a Whole Number | | | | | |
| 21 | 21 | 47–49 | 47–49b | Additional Materials   * Bible | Topic: Division  Skills: writing related equations, dividing to find a  2- or 3-digit quotient  BWS: Service |
| 22 | 22 | 50–51 | 50–51b | Teacher Resources   * 14 Short Form of Division | Topic: Multiples of 10  Skills: divisibility rules, dividing multiples of 10 by using mental math, dividing by a 2-digit multiple of 10, estimating a quotient |
| 23 | 23 | 52–53 | 52–53b | Assessments   * Chapter 3 Quiz 1 | Topic: 2-Digit Divisors  Skills: estimating a quotient, dividing by a 2-digit divisor  BWS: Service |
| 24 | 24 | 54–55 | 54–55b |  | Topic: Dividing a Decimal by a Whole Number  Skills: dividing a decimal by a 1-digit whole number, annexing a 0 to rename a decimal, estimating a quotient, expressing a fraction as an equivalent decimal |
| 25 | 25 | 56–57 | 56–57b |  | Topic: Dividing a Decimal by 2-Digit Divisors  Skills: determining an average or a unit rate, dividing a decimal by a 2-digit whole number, expressing a fraction as an equivalent decimal  BWS: Service |
| 26 | 26 | 58–59 | 58–59b |  | Topic: Dividing by a Power of 10  Skills: dividing by a power of 10, estimating and solving division word problems, dividing a whole number or decimal by a 3-digit divisor |
| 27 | 27 | 60–61 | 60–61b | Assessments   * Chapter 3 Quiz 2 | Topic: Order of Operations  Skills: using the order of operations to simplify an expression, completing an expression to make an equation true |
| 28 | 28 | 62–63 | 62–63b | Teacher Resources   * 15 Ticket in the Door * 16 Multistep Problems   Additional Materials   * Bible | Topic: Multistep Problems  Skills: solving multistep problems using the order of operations  BWS: Service |
| 29 | 29 | 64–65 | 64–65b |  | Topic: Chapter Review |
| 30 | 30 | 66–68 | 66–68 |  | Topic: Test & Cumulative Review |

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| Chapter 4: Fraction Theory | | | | | |
| 31 | 31 | 69–71 | 69–71b |  | Topic: Greatest Common Factor  Skills: determining the greatest common factor, applying the GCF to problem-solving situations  BWS: Design |
| 32 | 32 | 72–73 | 72–73b |  | Topic: Least Common Multiple  Skills: determining the least common multiple, applying the LCM to problem-solving situations |
| 33 | 33 | 74–75 | 74–75b | Additional Materials   * inch ruler (eighths) | Topic: Proper Fractions  Skills: writing a fraction, completing a fraction model |
| 34 | 34 | 76–77 | 76–77b | Assessments   * Chapter 4 Quiz 1 | Topic: Improper Fractions & Mixed Numbers  Skills: renaming improper fractions and mixed numbers |
| 35 | 35 | 78–79 | 78–79b | Additional Materials   * blank sheets of paper | Topic: Equivalent Fractions  Skills: renaming fractions to higher or lower terms  BWS: Design |
| 36 | 36 | 80–81 | 80–81b |  | Topic: Comparing & Ordering Fractions  Skills: comparing and ordering fractions and mixed numbers |
| 37 | 37 | 82–83 | 82–83b | Assessments   * Chapter 4 Quiz 2 | Topic: More Comparing Fractions  Skills: using strategies to compare and order fractions |
| 38 | 38 | 84–85 | 84–85b | Teacher Resources   * 17 Percent Circle   Additional Materials   * blank sheets of paper | Topic: Fractions & Percents  Skills: writing a percent as a fraction and a fraction as a percent |
| 39 | 39 | 86–87 | 86–87b |  | Topic: Chapter Review  BWS: Design |
| 40 | 40 | 88–89 | 88–89 |  | Topic: Test & Cumulative Review |

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| Chapter 5: Adding & Subtracting Fractions | | | | | |
| 41 | 41 | 90, 92–93 | 90–93b | Teacher Resources   * 18 Fraction Number Lines | Topic: Estimating Sums & Differences  Skills: identifying fractions equivalent to 1 and  to ½, estimating sums and differences of mixed numbers and fractions by rounding |
| 42 | 42 | 91, 94–95 | 94–95b |  | Topic: Adding & Subtracting Like Fractions  Skills: adding and subtracting fractions, applying addition properties to fractions  BWS: Knowledge |
| 43 | 43 | 96–97 | 96–97b |  | Topic: Adding & Subtracting Related Fractions  Skills: performing operations with unlike but related denominators, solving fraction word problems |
| 44 | 44 | 98–99 | 98–99b | Teacher Resources   * 19 Trees * 20 Unlike Denominators   Assessments   * Chapter 5 Quiz 1 | Topic: Adding & Subtracting Unlike Fractions  Skills: performing operations with unlike and unrelated denominators, multiplying unlike denominators to find a common denominator  BWS: Knowledge |
| 45 | 45 | 100–101 | 100–101b |  | Topic: More Fractions & Mixed Numbers  Skills: solving problems with 3 addends, solving problems by using the least common denominator |
| 46 | 46 | 102–3 | 102–3b | Teacher Resources   * 21 Guess & Check | Topic: Guess & Check  Skills: using the guess-and-check strategy  BWS: Knowledge |
| 47 | 47 | 104–5 | 104–5b |  | Topic: Chapter Review  BWS: Knowledge |
| 48 | 48 | 106–8 | 106–8 |  | Topic: Test & Cumulative Review |
| 49 | 49 | 91, 109–10 | 109–10a | Teacher Resources   * 22 UV Skin Damage * 23 Electromagnetic Spectrum,  UV Rays & SPF * 24 UV and Me Basics * 25 Engineering Design Process   Additional Materials   * See Lesson 49 list. | Topic: STEM: UV and Me  Skills: defining a problem, creating a model, calculating UV rays based on UPF |
| 50 | 50 | 109–10 | 110b–c | Teacher Resources   * 25 Engineering Design Process   Additional Materials   * See Lesson 50 list. | Topic: STEM: UV and Me  Skills: devising a scale, collecting data  BWS: Knowledge |
| 51 | 51 | 109–10 | 110d–e | Teacher Resources   * 26 STEM Rubric: UV and Me   Additional Materials   * See Lesson 51 list. | Topic: STEM: UV and Me  Skills: designing, constructing, presenting, and assessing a UV-protective clothing prototype; improving a design  BWS: Knowledge |
| Day | Lesson | Student Edition Pages | Teacher Edition Pages | Teacher Resources &  Additional Materials | Topics, Skills & Biblical Worldview Shaping |
| Chapter 6: Plane Figure Geometry | | | | | |
| 52 | 52 | 111–13 | 111–13b | Teacher Resources   * 27 Coordinate Plane * 28 Coordinate Planes   Additional Materials   * string * card stock | Topic: Basic Geometric Figures  Skills: identifying and naming points, lines, and planes; graphing and identifying points on a  coordinate plane  BWS: Design |
| 53 | 53 | 114–15 | 114–15b | Teacher Resources   * 28 Coordinate Planes   Additional Materials   * rulers * small rectangular poster | Topic: Types of Lines  Skills: graphing points of a coordinate plane to form intersecting or parallel lines, using variables  to represent coordinates on a coordinate plane |
| 54 | 54 | 116–17 | 116–17b | Teacher Resources   * 29 Angles   Additional Materials   * chalk or markers * blank sheets of paper * protractors | Topic: Classifying & Measuring Angles  Skills: naming angles and rays, classifying and measuring angles |
| 55 | 55 | 118–19 | 118–19b | Teacher Resources   * 30 Supplementary Angles * 31 Complementary Angles * 32 Complementary &  Supplementary Angles   Additional Materials   * protractors   Assessments   * Chapter 6 Quiz 1 | Topic: Angle Relationships  Skills: finding the unknown measure of an angle in a pair of supplementary or complementary angles |
| 56 | 56 | 120–21 | 120–21b | Teacher Resources   * 27 Coordinate Plane * 28 Coordinate Planes   Additional Materials   * toothpicks or craft sticks * rulers | Topic: Polygons  Skills: identifying and naming line segments,  distinguishing regular and irregular polygons, graphing points on a coordinate plane |
| 57 | 57 | 122–23 | 122–23b | Teacher Resources   * 33 Triangles   Additional Materials   * scissors * protractors * rulers | Topic: Triangles  Skills: finding the unknown measure of an angle  in a triangle, classifying triangles by their angles and by their sides |
| 58 | 58 | 124–25 | 124–25b | Teacher Resources   * 34 Hierarchy of Quadrilaterals * 35 Quadrilaterals * 36 Polygon Angle Measure   Additional Materials   * protractors * rulers | Topic: Quadrilaterals  Skills: classifying quadrilaterals and stating the sum of their angles, finding the unknown measure of an angle in a quadrilateral  BWS: Design |

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| Day | Lesson | Student Edition Pages | Teacher Edition Pages | Teacher Resources &  Additional Materials | Topics, Skills & Biblical Worldview Shaping |
| 59 | 59 | 126–27 | 126–27b | Teacher Resources   * 37 Congruent & Similar Polygons   Additional Materials   * construction paper * protractors * rulers * tracing paper * graph paper | Topic: Congruent & Similar Figures  Skills: identifying and drawing congruent and  similar polygons, writing a ratio for corresponding sides in a pair of polygons |
| 60 | 60 | 128–29 | 128–29b | Teacher Resources   * 38 Transformations * 39 Block Letters   Additional Materials   * construction paper * notebook paper | Topic: Transformations & Symmetry  Skills: demonstrating a translation, reflection, and rotation  BWS: Design |
| 61 | 61 | 130–31 | 130–31b | Additional Materials   * protractors * rulers * blank sheets of paper   Assessments   * Chapter 6 Quiz 2 | Topic: Circles  Skills: identifying the parts of a circle, measuring central angles; making a circle graph to represent given data |
| 62 | 62 | 132–33 | 132–33b | Teacher Resources   * 40 Polyhedrons   Additional Materials   * set of 3-dimensional figures * 3 × 5 cards * transparent tape | Topic: 3-Dimensional Figures  Skills: constructing and classifying 3-dimensional figures |
| 63 | 63 | 134–35 | 134–35b | Teacher Resources   * 28 Coordinate Planes * 32 Complementary &  Supplementary Angles * 33 Triangles * 35 Quadrilaterals * 38 Transformations   Additional Materials   * protractors * rulers | Topic: Chapter Review |
| 64 | 64 | 136–38 | 136–38 |  | Topic: Test & Cumulative Review |

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| Chapter 7: Multiplying Fractions & Decimals | | | | | |
| 65 | 65 | 139–41 | 139–41b | Teacher Resources   * 41 Fraction Paper Folding   Additional Materials   * counters * blank sheets of paper | Topic: Multiplying Fractions  Skills: multiplying a whole number and a fraction, multiplying to find a fraction of a whole number or of a fraction  BWS: Modeling |
| 66 | 66 | 142–43 | 142–43b |  | Topic: Simplifying  Skills: multiplying fractions by using cancellation, identifying the reciprocal of a fraction |
| 67 | 67 | 144–45 | 144–45b |  | Topic: Multiplying Mixed Numbers  Skills: applying the Distributive Property of Multiplication to mixed numbers |
| 68 | 68 | 146–47 | 146–47b | Assessments   * Chapter 7 Quiz 1 | Topic: Multiplying Decimals  Skills: estimating a decimal product by rounding, applying the Distributive Property of Multiplication to decimals  BWS: Modeling |
| 69 | 69 | 148–49 | 148–49b | Additional Materials   * graph paper * colored markers: red and blue | Topic: More Multiplying Decimals  Skills: multiplying a decimal by a decimal, multiplying money by a decimal |
| 70 | 70 | 150–51 | 150–51b | Teacher Resources   * 42 In-between Numbers | Topic: Finding In-between Numbers  Skills: identifying fractions and decimals that come between two numbers, solving a multistep word problem  BWS: Modeling |
| 71 | 71 | 152–53 | 152–53b |  | Topic: Chapter Review |
| 72 | 72 | 154–56 | 154–56 |  | Topic: Test & Cumulative Review |

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| Chapter 8: Dividing Fractions | | | | | |
| 73 | 73 | 157–59 | 157–59b |  | Topic: Dividing by a Fraction  Skills: dividing whole numbers, fractions, and mixed numbers by fractions |
| 74 | 74 | 160–61 | 160–61b | Additional Materials   * Bible * colored markers or chalk: 2 colors * colored pencils: 2 colors | Topic: More Dividing Fractions  Skills: dividing a fraction to find a quotient with a remainder, dividing by using a model  BWS: Service |
| 75 | 75 | 162–63 | 162–63b | Additional Materials   * colored markers or chalk: 3 colors | Topic: Multiplying by the Reciprocal  Skills: dividing a fraction by a fraction or a whole number by multiplying by the reciprocal |
| 76 | 76 | 164–65 | 164–65b | Additional Materials   * Bible   Assessments   * Chapter 8 Quiz 1 | Topic: Mixed Numbers & Reciprocals  Skills: dividing a mixed number by multiplying by the reciprocal, solving fraction word problems  BWS: Service |
| 77 | 77 | 166–67 | 166–67b |  | Topic: Multistep Equations  Skills: using the order of operations to write an equation and solve a multistep word problem |
| 78 | 78 | 168–69 | 168–69b |  | Topic: Applying Mathematical Properties  Skills: using mathematical properties and the order of operations to evaluate an expression, substituting a given value for a variable in an expression |
| 79 | 79 | 170–71 | 170–71b | Teacher Resources   * 43 Multistep Word Problems | Topic: More Multistep Word Problems  Skills: solving a multistep equation for a multistep word problem  BWS: Service |
| 80 | 80 | 172–73 | 172–73b |  | Topic: Chapter Review  BWS: Service |
| 81 | 81 | 174–77 | 174–77 |  | Topic: Test & Cumulative Review |

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| Chapter 9: Dividing Decimals | | | | | |
| 82 | 82 | 178, 180–81 | 178, 180–81b | Teacher Resources   * 11 Graph Paper * 44 Birthday Party Plans   Additional Materials   * scissors * calculators (optional) | Topic: Dividing Decimals  Skills: dividing a decimal by a 1-digit whole number, renaming a decimal by annexing a 0, using mental math to divide a decimal by a power of 10  BWS: Knowledge |
| 83 | 83 | 179, 182–83 | 179, 182–83b |  | Topic: Estimating Quotients  Skills: dividing a decimal by a 2-digit whole number, dividing to find a decimal fraction |
| 84 | 84 | 184–85 | 184–85b | Assessments   * Chapter 9 Quiz 1 | Topic: Repeating Decimals & Rounding Quotients  Skills: indicating a repeating decimal, solving money word problems  BWS: Knowledge |
| 85 | 85 | 186–87 | 186–87b | Teacher Resources   * 11 Graph Paper | Topic: Renaming Fractions as Decimals  Skills: identifying a quotient as a repeating decimal or a non-repeating, non-terminating decimal |
| 86 | 86 | 188–90 | 188–90a |  | Topic: Dividing a Decimal by a Decimal  Skills: dividing a whole number by a decimal, solving a word problem involving decimal division  BWS: Knowledge |
| 87 | 87 | 191–92 | 191–92b | Teacher Resources   * 11 Graph Paper * 45 Input/Output Tables   Assessments   * Chapter 9 Quiz 2 | Topic: More Dividing Decimals  Skills: dividing a decimal by a decimal, completing a division input/output table including decimals |
| 88 | 88 | 193–95 | 193–95a | Additional Materials   * calculators | Topic: Real Numbers  Skills: classifying real numbers, applying addition and multiplication properties to real numbers  BWS: Knowledge |
| 89 | 89 | 196–97 | 196–97 | Teacher Resources   * 46 Dividing Decimals | Topic: Chapter Review |
| 90 | 90 | 198–200 | 198–200 |  | Topic: Test & Cumulative Review |
| 91 | 91 | 179, 201–2 | 179, 201–2a | Teacher Resources   * 25 Engineering Design Process * 47 Classroom Layout Graph Paper * 48 Sample Classroom Layout   Additional Materials   * See Lesson 91 list. | Topic: STEM: What’s Your Plan?  Skills: identifying a problem, collaborating on a solution, preparing a model |
| 92 | 92 | 201–2 | 202b–c | Teacher Resources   * 49 Sample Evacuation Plan Model * 50 Sample Evacuation Plan  Algorithms   Additional Materials   * See Lesson 92 list. | Topic: STEM: What’s Your Plan?  Skills: mapping, testing, & revising a route; writing an algorithm using coding terms; debugging an algorithm |
| 93 | 93 | 179, 201–2 | 179, 202d | Teacher Resources   * 51 STEM Rubric: What’s Your Plan?   Additional Materials   * See Lesson 93 list. | Topic: STEM: What’s Your Plan?  Skills: debugging and running a program  BWS: Modeling |

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| Chapter 10: Equations | | | | | |
| 94 | 94 | 203–5 | 203–5b |  | Topic: Expressions  Skills: writing numerical or algebraic expressions, evaluating expressions using substitution |
| 95 | 95 | 206–7 | 206–7b |  | Topic: Equations  Skills: writing an equation with two equal expressions, determining the unknown in a word problem and writing it as a variable  BWS: Modeling |
| 96 | 96 | 208–9 | 208–9b | Teacher Resources   * 52 Variable Cards N * 53 Variable Cards X   Additional Materials   * 18 round counters | Topic: Simplifying Expressions  Skills: computing sums and products that are multiples of 10, simplifying algebraic expressions by applying the Commutative and Associative Properties |
| 97 | 97 | 210–11 | 210–11b | Additional Materials   * 1 n card and 1 x card from the patterns provided on the Variable Cards pages * 30 round counters | Topic: Addition & Subtraction Equations  Skills: solving addition and subtraction equations using inverse operations, checking addition and subtraction equations using substitution  BWS: Modeling |
| 98 | 98 | 212–13 | 212–13b | Additional Materials   * 5 n cards from the pattern pro­vided on the Variable Cards N page * 15 round counters | Topic: Multiplication Equations  Skills: solving multiplication equations using division (inverse operation) |
| 99–100 | 99 | 214–15 | 214–15b |  | Topic: Multiplication & Division Equations  Skills: solving multiplication and division equations using inverse operations, plotting an inequality on a number line, determining whether a given number is a solution to an inequality |
| 101 | 100 | 216–17 | 216–17b | Additional Materials   * geographic compass or picture of one   Assessments   * Chapter 10 Quiz 1 | Topic: Equivalent Expressions  Skills: finding equivalent expressions by applying the Distributive Property, solving equations using inverse operations  BWS: Modeling |
| 102 | 101 | 218–19 | 218–19b | Teacher Resources   * 54 Graphing an Equation | Topic: Distance = Rate × Time  Skills: solving problems using the d = rt formula, completing a table using the d = rt formula  BWS: Modeling |
| 103 | 102 | 220–21 | 220–21b |  | Topic: Chapter Review |
| 104 | 103 | 222–24 | 222–24 |  | Topic: Test & Cumulative Review |

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| Chapter 11: Perimeter & Area | | | | | |
| 105 | 104 | 225–27 | 225–27b | Additional Materials   * ruler | Topic: Perimeter  Skills: calculating the unknown length of a side of a polygon, solving an algebraic expression to find the perimeter of a rectangle |
| 106 | 105 | 228–30 | 228–30a | Teacher Resources   * 55 Finding the Circumference   Additional Materials   * cylindrical objects * rulers * calculators * 12 in. lengths of string | Topic: Circumference  Skills: calculating the circumference of a circle using a formula, calculating the diameter of a circle given the circumference  BWS: Design |
| 107 | 106 | 231–33 | 231–33a | Teacher Resources   * 56 Area: Rectangles, Squares & Parallelograms   Additional Materials   * scissors   Assessments   * Chapter 11 Quiz 1 | Topic: Area of Parallelograms  Skills: calculating the areas of parallelograms using a formula, calculating the area of a complex figure |
| 108 | 107 | 234–35 | 234–35b | Teacher Resources   * 57 Area: Triangles   Additional Materials   * rulers * calculators | Topic: Area of Triangles  Skills: calculating the area of triangles using a formula, calculating the unknown height or base of a triangle  BWS: Design |
| 109 | 108 | 236–37 | 236–37b | Teacher Resources   * 58 Area: Circles   Additional Materials   * rulers * calculators | Topic: Area of Circles  Skills: calculating the area of a circle using a formula, estimating the area of a circle |
| 110 | 109 | 238–39 | 238–39b | Teacher Resources   * 59 Surface Area: Triangular Prism   Additional Materials   * classroom set of 3-dimensional figures or real-world objects * cereal boxes * rulers * transparent tape   Assessments   * Chapter 11 Quiz 2 | Topic: Surface Area of Prisms  Skills: calculating the surface area of prisms using formulas, constructing a triangular prism  BWS: Design |
| 111 | 110 | 240–41 | 240–41b | Teacher Resources   * 60 Surface Area   Additional Materials   * small oatmeal container * 2 sheets of 12" × 18" construction paper * rulers * transparent tape * cylinders * sheets of construction paper * calculators | Topic: Surface Area of Cylinders  Skills: calculating the surface area of a cylinder using formulas, constructing a cylinder net |
| 112 | 111 | 242–43 | 242–43b | Teacher Resources   * 11 Graph Paper * 61 Floor Plan Activity * 62 Floor Plan Grid   Additional Materials   * samples of floor plans * rulers * calculators * scissors * sheets of 9" × 12" construction paper * glue sticks | Topic: Fixed Areas  Skills: calculating the area and perimeter of a rectangle, calculating the area of a complex figure, relating geometry to real-world situations  BWS: Design |
| 113 | 112 | 244–45 | 244–45b | Teacher Resources   * 60 Surface Area * 63 Geometry Review I * 64 Geometry Review II * 65 Nets   Additional Materials   * calculators | Topic: Chapter Review |
| 114 | 113 | 246–48 | 246–48 |  | Topic: Test & Cumulative Review |

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| Chapter 12: Volume | | | | | |
| 115 | 114 | 249–51 | 249–51b | Teacher Resources   * 66 Shipping Volume   Additional Materials   * blank sheets of 8 ½" × 11" paper * a clear storage container with lid * cube-shaped blocks * a rectangular prism-shaped block * a ruler | Topic: Volume of Rectangular Prisms  Skills: finding the volume of a rectangular prism by using a model or a formula  BWS: Service |
| 116 | 115 | 252–53 | 252–53b | Additional Materials   * blank sheets of 8 ½" × 11" paper * cube-shaped blocks | Topic: Volume of Cubes  Skills: finding the volume of a cube by using a model or a formula, calculating an unknown meas­urement, solving a word problem |
| 117 | 116 | 254–55 | 254–55b | Teacher Resources   * 67 Triangular Prisms & Cylinders   Additional Materials   * blank sheets of 8 ½" × 11" paper * cube-shaped blocks * calculators   Assessments   * Chapter 12 Quiz 1 | Topic: Volume of Other 3D Figures  Skills: finding the volume of an irregular prism by using a model, calculating the volume of a triangular prism or a cylinder  BWS: Service |
| 118–19 | 117 | 256–57 | 256–57b | Teacher Resources   * 68 Fixed Volume   Additional Materials   * cube-shaped blocks * sheets of 9" × 12" construction paper * rulers * transparent tape * box lids or rectangular pans * 1 c measuring cups * rice, unpopped popcorn, or dried beans * calculators | Topic: Fixed Volumes & Fixed Lateral Surfaces  Skills: constructing prisms with the same volume but different surface areas, constructing cylindrical figures with the same lateral surface area but different volumes |
| 120 | 118 | 258–59 | 258–59b | Teacher Resources   * 69 Volume Review * 70 Volume Word Problems   Additional Materials   * copies of area drawings * cube-shaped blocks * calculators | Topic: Chapter Review  BWS: Service |
| 121 | 119 | 260–63 | 260–63 |  | Topic: Test & Cumulative Review |

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| Chapter 13: Ratios, Proportions & Percents | | | | | |
| 122 | 120 | 264, 266–67 | 264, 266–67b | Additional Materials   * pennies, nickels, dimes, and quarters | Topic: Ratios & Rates  Skills: writing a ratio in three forms, finding equivalent ratios, determining the unit rate  BWS: Design |
| 123 | 121 | 265, 268–69 | 265, 268–69b | Teacher Resources   * 72 Pictured Ratios * 73 Ratio Tables | Topic: Ratio Tables  Skills: completing a ratio table, solving problems using ratio tables |
| 124 | 122 | 270–71 | 270–71b | Additional Materials   * black and red counters | Topic: Solving Proportions  Skills: determining whether two ratios are proportional, solving for a missing term in a proportion  BWS: Design |
| 125 | 123 | 272–74 | 272–74a | Teacher Resources   * 11 Graph Paper * 74 Missing Measurements   Additional Materials   * rulers or straight edges | Topic: Similar Figures  Skills: finding the unknown measure in similar figures, using indirect measurement to find the unknown measure |
| 126 | 124 | 275–77 | 275–77a | Additional Materials   * modeling clay * a map * rulers * calculators   Assessments   * Chapter 13 Quiz 1 | Topic: Scale  Skills: finding actual measurements using a scale and a scale drawing, map, or model; determining the unknown measure on a scale drawing  BWS: Design |
| 127 | 125 | 278–79 | 278–79b | Teacher Resources   * 11 Graph Paper * 75 Percent   Additional Materials   * calculators | Topic: Percent  Skills: expressing percents as ratios, decimals, and fractions; expressing decimals and fractions as percents |
| 128 | 126 | 280–81 | 280–81b | Teacher Resources   * 76 Percent Models: Finding the Part   Additional Materials   * calculators | Topic: Finding the Percent of a Number  Skills: finding the percent of a number by using an equation, a model, and a proportion; solving percent word problems |
| 129 | 127 | 282–84 | 282–84a | Teacher Resources   * 77 Percent Models: Finding the Whole   Additional Materials   * calculators   Assessments   * Chapter 13 Quiz 2 | Topic: Finding the Unknown Whole  Skills: finding the unknown whole in a percent problem by using a model, an equation, and a  proportion; solving percent word problems |
| 130 | 128 | 285–87 | 285–87a | Additional Materials   * calculators | Topic: Speed, Distance & Time  Skills: calculating the distance, the rate of speed, and the time; finding an equivalent rate by using a proportion  BWS: Design |
| 131 | 129 | 288–89 | 288–89b | Teacher Resources   * 78 Circle Graph: Elements in the Earth’s Crust   Additional Materials   * calculators | Topic: Chapter 13 Review |
| 132 | 130 | 290–92 | 290–92 |  | Topic: Test & Cumulative Review |
| 133 | 131 | 265, 293–94 | 265, 293–94a | Teacher Resources   * 11 Graph Paper * 25 Engineering Design Process * 79 Bridge & Truss Designs   Additional Materials   * See Lesson 131 list. | Topic: STEM: Building a Bridge  Skills: identifying and researching a problem, suggesting solutions, collaborating on a design |
| 134 | 132 | 293–94 | 294b | Teacher Resources   * 80 STEM Rubric: Building a Bridge   Additional Materials   * See Lesson 132 list. | Topic: STEM: Building a Bridge  Skills: building a bridge prototype according to specifications |
| 135 | 133 | 293–94 | 294c–d | Additional Materials   * See Lesson 133 list. | Topic: STEM: Building a Bridge  Skills: testing a design, analyzing a design with math, solving a problem by using a ratio  BWS: Design |

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| Chapter 14: Measurement | | | | | |
| 136 | 134 | 295–97 | 295–97b | Teacher Resources   * 11 Graph Paper * 81 Measurement Flashcards   Additional Materials   * rulers * a yardstick * a measuring tape (customary) * colored pencils | Topic: Linear Measurement  Skills: estimating, measuring, and converting linear measurements; finding a fraction of a measurement unit; adding and subtracting linear measurements  BWS: Knowledge |
| 137 | 135 | 298–99 | 298–99b | Teacher Resources   * 82 Customary Measurement Craze   Additional Materials   * a spring scale * a 1 lb loaf of bread * objects to weigh * customary measurement  containers * waterproof containers * water (2 gal) * food coloring (optional) | Topic: Weight & Capacity  Skills: estimating, weighing, measuring, and converting customary weight and capacity measurements; adding and subtracting customary weight and capacity measurements |
| 138 | 136 | 300–301 | 300–301b | Teacher Resources   * 83 Metric Measurement * 84 Metric Measure Mania   Additional Materials   * a meter stick * a yardstick * measuring tapes (metric) * paper clips | Topic: Metric Linear Measurement  Skills: estimating, measuring, and converting  metric linear measurements; determining the appropriate linear measurement; comparing meas­urements by using > or <; adding and subtracting metric linear measurements |
| 139 | 137 | 302–3 | 302–3b | Teacher Resources   * 83 Metric Measurement   Additional Materials   * 1 L bottles of water * a 1 L beaker * a 5 mL plastic syringe * water for measuring * food coloring (optional) * waterproof containers * additional containers for  measuring * a balance or metric scale   Assessments   * Chapter 14 Quiz 1 | Topic: Metric Capacity & Mass  Skills: estimating, measuring, and converting  metric capacity and mass measurements  BWS: Knowledge |
| 140 | 138 | 304–5 | 304–5b | Teacher Resources   * 81 Measurement Flashcards * 85 Customary Measurement  Word Problems * 86 Metric Measurement Word Problems | Topic: Customary & Metric Systems  Skills: solving measurement word problems |
| 141 | 139 | 306–7 | 306–7b | Teacher Resources   * 87 Thermometer * 88 Temperature Hunt * 89 Double-Scale Thermometer   Additional Materials   * waterproof containers * water * waterproof thermometers * additional thermometers * rulers | Topic: Fahrenheit & Celsius  Skills: identifying standard Celsius and Fahrenheit temperatures, determining a reasonable temperature, reading a thermometer, determining the difference between temperatures, measuring temperatures, converting temperatures between systems |
| 142 | 140 | 308–9 | 308–9b | Teacher Resources   * 81 Measurement Flashcards * 90 Customary & Metric Conversions   Additional Materials   * a larger set of measurement flashcards * measurable objects * rulers | Topic: Relating Customary & Metric Units  Skills: identifying approximate equivalencies between customary and metric units of measurement, comparing customary and metric measurements, estimating conversions between customary and metric measurements  BWS: Knowledge |
| 143 | 141 | 310–11 | 310–11b | Teacher Resources   * 91 Time Measurement   Additional Materials   * a demonstration clock | Topic: Telling & Renaming Time  Skills: differentiating between a.m. and p.m., converting units of time, finding a fraction of a unit of time, adding and subtracting time |
| 144 | 142 | 312–13 | 312–13b | Teacher Resources   * 91 Time Measurement * 92 Time Zones of the World * 93 Time Zones   Additional Materials   * demonstration clocks   Assessments   * Chapter 14 Quiz 2 | Topic: Elapsed Time & Time Zones  Skills: using a table to determine world time zones, determining elapsed time  BWS: Knowledge |
| 145 | 143 | 314–15 | 314–15b | Teacher Resources   * 92 Time Zones of the World * 94 Map Key * 95 Blank Thermometer   Additional Materials   * labeled measurable objects from Lesson 140 * measuring tools * rulers | Topic: Renaming Units of Measure  Skills: estimating customary and metric measurements, calculating measurements, solving meas­urement word problems, determining mileage by using a map scale |
| 146 | 144 | 316–17 | 316–17b |  | Topic: Unit Multipliers  Skills: writing an equivalency as a unit multiplier, converting measurements by using a unit multiplier |
| 147 | 145 | 318–19 | 318–19b | Teacher Resources   * 95 Blank Thermometer   Additional Materials   * a larger set of measurement  flashcards from Lesson 140 * demonstration clocks | Topic: Chapter Review |
| 148 | 146 | 320–23 | 320–23 | Additional Materials   * demonstration clocks (optional) | Topic: Test & Cumulative Review |

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| Chapter 15: Statistics | | | | | |
| 149 | 147 | 324, 326–27 | 324,  326–27b | Teacher Resources   * 96 Frequency Tables   Additional Materials   * calculators | Topic: Statistics  Skills: completing a frequency table; determining the range, median, and mode for a set of data; calculating the mean  BWS: Service |
| 150 | 148 | 325, 328–29 | 325, 328–29b | Teacher Resources   * 97 Double Bar Graph * 98 Double Line Graph * 99 Types of Graphs | Topic: Double Bar & Double Line Graphs  Skills: interpreting a double bar and a double line graph |
| 151 | 149 | 330–31 | 330–31b | Teacher Resources   * 99 Types of Graphs * 100 Stem-and-Leaf Plot | Topic: Stem-and-Leaf Plots  Skills: interpreting and completing a stem-and-leaf plot |
| 152 | 150 | 332–33 | 332–33b | Teacher Resources   * 99 Types of Graphs * 101 Line Plot   Additional Materials   * 3 × 5 cards   Assessments   * Chapter 15 Quiz 1 | Topic: Line Plots  Skills: interpreting and recording data on a line plot, determining the effects of an outlier |
| 153 | 151 | 334–35 | 334–35b | Teacher Resources   * 99 Types of Graphs * 102 Restaurant Statistics * 103 Histogram: Piano Practice Statistics * 104 Histogram   Additional Materials   * rulers | Topic: Histograms  Skills: interpreting and constructing a histogram  BWS: Service |
| 154 | 152 | 336–37 | 336–37b | Teacher Resources   * 99 Types of Graphs * 105 Box-and-Whisker Plot: Points Scored * 106 Box-and-Whisker Plot   Additional Materials   * rulers | Topic: Box-and-Whisker Plots  Skills: interpreting a box-and-whisker plot; determining the lower, middle, and upper quartiles of a set of data; constructing a box-and-whisker plot |
| 155 | 153 | 338–39 | 338–39b | Teacher Resources   * 107 Graph: Double Bar Graph * 108 Graph: Double Line Graph * 109 Stem-and-Leaf Plot & Line Plot * 110 Graph: Histogram * 111 Graph: Box-and-Whisker Plot   Assessments   * Chapter 15 Quiz 2 | Topic: Graph Review  Skills: interpreting graphs  BWS: Service |
| 156 | 154 | 340–41 | 340–41b | Teacher Resources   * 112 Data   Additional Materials   * prepared terms and definitions from Types of Graphs, pages 1–4 * 3 × 5 cards | Topic: Comparing Graphs  Skills: choosing a graph to display a set of data |
| 157 | 155 | 342–43 | 342–43b | Teacher Resources   * 97 Double Bar Graph * 98 Double Line Graph * 103 Histogram: Piano Practice Statistics * 105 Box-and-Whisker Plot: Points Scored   Additional Materials   * prepared terms and definitions from Types of Graphs, pages 1–4 * Bible | Topic: Chapter Review  BWS: Service |
| 158 | 156 | 344–46 | 344–46 |  | Topic: Test & Cumulative Review |
| 159 | 157 | 325, 347–48 | 347–48a | Teacher Resources   * 25 Engineering Design Process * 113 Business Idea Organizer   Additional Materials   * examples of successful young entrepreneurs (optional) | Topic: STEM: Entrepreneurship  Skills: identifying and researching a problem, recording possible solutions, identifying a workable solution |
| 160 | 158 | 347–48 | 348b–c | Teacher Resources   * 114 Rover's Romps Business Plan * 115 Business Plan   Additional Materials   * completed Business Idea Organizer pages | Topic: STEM: Entrepreneurship  Skills: assembling business data, writing a business plan  BWS: Service |
| 161 | 159 | 347–48 | 348d–e | Teacher Resources   * 116 Rover's Romps Profit Projection * 117 Business Profit Projection * 118 STEM Rubric: Entrepreneurship   Additional Materials   * completed Business Plan pages | Topic: STEM: Entrepreneurship  Skills: testing and improving a plan |

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| Chapter 16: Probability | | | | | |
| 162 | 160 | 349–51 | 349–51b | Teacher Resources   * 119 Probability * 120 Theoretical Probability   Additional Materials   * colored markers: red and blue * colored pencils or crayons: red and blue * calculators (optional) | Topic: Theoretical Probability  Skills: deciding whether a given statement is impossible, unlikely, likely, or certain; finding the theoretical probability of an event  BWS: Design |
| 163 | 161 | 352–53 | 352–53b | Teacher Resources   * 121 Sample Spaces * 122 Tree Diagram * 123 Multiplication Counting Principle   Additional Materials   * calculators (optional) | Topic: Sample Spaces  Skills: finding the sample space for and the probability of an event, making a tree diagram, determining the number of possible outcomes using the Multiplication Counting Principle |
| 164 | 162 | 354–55 | 354–55b | Teacher Resources   * 124 Experimental Probability * 125 Spinning Penny Experiment   Additional Materials   * paper clips * calculators (optional) * pennies (optional) | Topic: Experimental Probability  Skills: finding the theoretical probability of an event, conducting a probability experiment, finding the experimental probability of an event  BWS: Design |
| 165 | 163 | 356–57 | 356–57b | Teacher Resources   * 126 Fair or Unfair Games   Additional Materials   * 6 marbles: 4 orange, 1 brown, 1 yellow * an opaque bag * two 1–6 number cubes   Assessments   * Chapter 16 Quiz 1 | Topic: Fair or Unfair?  Skills: using probability to determine whether a game is fair or unfair, conducting a probability experiment, finding the experimental probability of an event, making predictions using probability |
| 166–67 | 164 | 358–59 | 358–59b | Additional Materials   * 6 marbles: 4 orange, 1 brown, 1 yellow * an opaque bag * a 1–6 number cube * calculators | Topic: Independent & Dependent Events  Skills: differentiating between independent and dependent compound events, finding the probability of compound events using a formula  BWS: Design |
| 168 | 165 | 360–61 | 360–61b | Teacher Resources   * 127 Probability Spinner   Additional Materials   * paper clips * calculators (optional) | Topic: Chapter Review |
| 169 | 166 | 362–64 | 362–64 |  | Topic: Test & Cumulative Review |

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| Chapter 17: Integers | | | | | |
| 170 | 167 | 366–67 | 366–67b | Teacher Resources   * 3 Positive & Negative Number Line | Topic: Integers  Skills: identifying integers on a number line,  finding the absolute value of a number, comparing and ordering integers |
| 171 | 168 | 365, 368–69 | 365, 368–69b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat * 129 Positive & Negative Number Lines   Additional Materials   * counters: black and red | Topic: Adding Integers  Skills: adding integers, solving a word problem  BWS: Modeling |
| 172 | 169 | 370–71 | 370–71b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat * 129 Positive & Negative Number Lines   Additional Materials   * counters: black and red | Topic: Subtracting Integers  Skills: subtracting integers, solving a word problem  BWS: Modeling |
| 173 | 170 | 372–73 | 372–73b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat * 130 Subtraction Patterns * 131 More Subtraction Patterns   Additional Materials   * counters: black and red   Assessments   * Chapter 17 Quiz 1 | Topic: Adding & Subtracting Integers  Skills: adding and subtracting integers, solving a word problem |
| 174 | 171 | 374–75 | 374–75b | Teacher Resources   * 3 Positive & Negative Number Line | Topic: More Integers  Skills: adding and subtracting integers, solving real-world problems |
| 175 | 172 | 376–77 | 376–77b | Teacher Resources   * 128 Algebra Mat * 132 Multiplication Patterns   Additional Materials   * counters: black and red | Topic: Multiplying Integers  Skills: multiplying integers, solving a word problem |
| 176 | 173 | 378–79 | 378–79b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat   Additional Materials   * counters: black and red | Topic: Multiplying & Dividing Integers  Skills: multiplying and dividing integers, solving real-world problems  BWS: Modeling |
| 177 | 174 | 380–81 | 380–81b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat * 133 Order of Operations   Additional Materials   * counters: black and red | Topic: Mixed Review  Skills: adding, subtracting, multiplying, and dividing integers; subtracting integers by adding the opposite; solving problems by applying the order of operations |
| 178 | 175 | 382–83 | 382–83b | Teacher Resources   * 27 Coordinate Plane * 28 Coordinate Planes   Assessments   * Chapter 17 Quiz 2 | Topic: Coordinate Planes  Skills: graphing points on a coordinate plane, writing ordered pairs to identify points on a coordinate plane |
| 179 | 176 | 384–85 | 384–85b | Teacher Resources   * 3 Positive & Negative Number Line * 128 Algebra Mat   Additional Materials   * counters: black and red | Topic: Chapter Review  BWS: Modeling |
| 180 | 177 | 386–88 | 386–88 |  | Topic: Test & Cumulative Review |