## Math 6, 4ed — Lesson Plan Overview

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping				
	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	<b>Topic:</b> Subtracting Whole Numbers <b>Skills:</b> 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		<b>Topic:</b> Adding & Subtracting Decimals <b>Skills:</b> 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				

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	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 & Topics, Skills & Biblical Worldview Sha	
Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping
				Chapter 6: Plane Figure Ge	ometry
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	Topic: Triangles Skills: finding the unknown measure of an angle in a triangle, classifying triangles by their angles and by their sides

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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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59	59	126–27	126–27b	Teacher Resources  • 37 Congruent & Similar Polygons Additional Materials  • construction paper  • protractors  • rulers  • tracing paper  • graph paper	<b>Topic:</b> Congruent & Similar Figures <b>Skills:</b> 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	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	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	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	<b>Topic:</b> Renaming Fractions as Decimals <b>Skills:</b> 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				

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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	<ul> <li>Additional Materials</li> <li>1 n card and 1 x card from the patterns provided on the <i>Variable Cards</i> pages</li> <li>30 round counters</li> </ul>	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 <i>n</i> cards from the pattern provided on the <i>Variable Cards N</i> 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	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	<b>Topic:</b> Distance = Rate × Time <b>Skills:</b> solving problems using the <i>d</i> = <i>rt</i> formula, completing a table using the <i>d</i> = <i>rt</i> formula <b>BWS:</b> 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	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 <ul> <li>59 Surface Area: Triangular Prism</li> </ul> <li>Additional Materials         <ul> <li>classroom set of 3-dimensional figures or real-world objects</li> <li>cereal boxes</li> <li>rulers</li> <li>transparent tape</li> </ul> </li> <li>Assessments</li> <li>Chapter 11 Quiz 2</li>	Topic: Surface Area of Prisms Skills: calculating the surface area of prisms using formulas, constructing a triangular prism BWS: Design				

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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					

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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

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping					
	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					

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping
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 <i>Time Measurement</i> 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

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping
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

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping				
	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				

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping
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

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping			
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			

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping				
	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				

Day	Lesson	Student Edition Pages	Teacher Edition Pages	Teacher Resources & Additional Materials	Topics, Skills & Biblical Worldview Shaping
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	<b>Topic:</b> Mixed Review <b>Skills:</b> 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