Saxon Course 1 – 6th grade

Lesson		
1	• Adding Whole Numbers and Money • Subtracting Whole Numbers and Money • Fact Families, Part 1	**CC.6.EE.3 (1st cluster)** Apply the properties of operations to generate equivalent expressions.
2	• Multiplying Whole Numbers and Money • Dividing Whole Numbers and Money • Fact Families, Part 2	**CC.6.NS.2 (1st cluster)** Fluently divide multi-digit numbers using the standard algorithm. **CC.6.EE.2b (1st cluster)** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. **CC.6.EE.3 (1st cluster)** Apply the properties of operations to generate equivalent expressions.
3	• Unknown Numbers in Addition • Unknown Numbers in Subtraction	**CC.6.EE.2a (1st cluster)** Write expressions that record operations with numbers and with letters standing for numbers. **CC.6.EE.2b (1st cluster)** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. **CC.6.EE.5 (2nd cluster)** Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. **CC.6.EE.6 (2nd cluster)** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. **CC.6.EE.7 (2nd cluster)** Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and

		$px = q$ for cases in which p, q and x are all nonnegative rational numbers.
4	• Unknown Numbers in Multiplication • Unknown Numbers in Division	**CC.6.EE.2a (1st cluster)** Write expressions that record operations with numbers and with letters standing for numbers. **CC.6.EE.5 (2nd cluster)** Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. **CC.6.EE.6 (2nd cluster)** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. **CC.6.EE.7 (2nd cluster)** Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.
5	• Order of Operations, Part 1	**CC.6.EE.3 (1st cluster)** Apply the properties of operations to generate equivalent expressions.
6	• Fractional Parts	**CC.6.MP.5** Use appropriate tools strategically
7	• Lines, Segments, and Rays • Linear Measure	**CC.6.MP.5** Use appropriate tools strategically
8	• Perimeter	**CC.6.MP.6** Attend to precision
9	• The Number Line: Ordering and Comparing	**CC.6.NS.7a (3rd cluster)** Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. **CC.6.NS.7b (3rd cluster)** Write, interpret, and explain statements of order for rational numbers in real-world contexts.

*	**Extension Activity 1 (p 19):** • Writing, Solving, and Graphing Inequalities	**CC.6.EE.5 (2nd cluster)** Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. **CC.6.EE.8 (2nd cluster)** Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.
10	• Sequences • Scales	**CC.6.MP.5** Use appropriate tools strategically
	Cumulative Assessment 1	
Inv. 1	• Frequency Tables • Histograms • Surveys	**CC.6.SP.4 (2nd cluster)** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. **CC.6.SP.2 (1st cluster)** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. **CC.6.SP.5a (2nd cluster)** Reporting the number of observations **CC.6.SP.5b (2nd cluster)** Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
11	• Problems About Comparing • Problems About Separating	**CC.6.EE.2a (2nd cluster)** Write expressions that record operations with numbers and with letters standing for numbers. **CC.6.EE.6 (2nd cluster)** Use variables to represent numbers and write expressions when solving a real-world or mathematical

		problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
12	• Place Value Through Trillions • Multistep Problems	**CC.6.EE.2b (1st cluster)** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.
13	• Problems About Comparing • Elapsed-Time Problems	**CC.6.EE.2c (1st cluster)** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
14	• The Number Line: Negative Number	**CC.6.NS.5 (3rd cluster)** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. **CC.6.NS.6c (3rd cluster)** Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. **CC.6.NS.7a(3rd cluster)** Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. **CC.6.NS.7b (3rd cluster)** Write, interpret, and explain statements of order for rational numbers in real-world

		contexts.
*	**Extension Activity 2 (p 21):** • Understanding and Comparing Absolute Values	**CC.6.NS.6a (3rd cluster)** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., - (-3) = 3, and that 0 is its own opposite. **CC.6.NS.7C (3rd cluster)** Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. **CC.6.NS.7d (3rd cluster)** Distinguish comparisons of absolute value from statements about order.
15	• Problems About Equal Groups	**CC.6.EE.2a (1st cluster)** Write expressions that record operations with numbers and with letters standing for numbers. **CC.6.EE.6 (2nd cluster)** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. **CC.6.EE.7 (2nd cluster)** Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.
	Cumulative Assessment 2	
16	• Rounding Whole Numbers • Estimating	**CC.6.MP.2** Reason abstractly and quantitatively.
17	• The Number Line: Fractions and Mixed Numbers	**CC.6.MP.5** Use appropriate tools strategically
18	• Average • Line Graphs	**CC.6.MP.2** Reason abstractly and quantitatively.
19	• Factors • Prime Numbers	**CC.6.EE.2b (1st cluster)**

		Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.
20	• Greatest Common Factor (GCF)	**CC.6.NS.4 (2nd cluster)** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
	Cumulative Assessment 3 **Extension Test 1**	
*	**Extension Activity 3 (p 23):** • Using the Greatest Common Factor and the Distributive Property	**CC.6.NS.4 (2nd cluster)** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
Inv. 2	• Investigating Fractions with Manipulatives	**CC.6.MP.4** Model with mathematics
21	• Divisibility	**CC.6.MP.7** Look for and make use of structure
22	• "Equal Groups" Problems with Fractions	**CC.6.MP.1** Make sense of problems and persevere in solving them
23	• Ratio • Rate	**CC.6.RP.1 (1st cluster)** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. **CC.6.RP.2** Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. 11Expectations for unit rates in this grade are limited to non-complex fractions. CC.6.RP.3b

		Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
24	• Adding and Subtracting Fractions That Have Common Denominators	**CC.6.MP.7** Look for and make use of structure
25	• Writing Division Answers as Mixed Numbers • Multiples	**CC.6.MP.7** Look for and make use of structure **CC.6.MP.8** Look for and express regularity in repeated reasoning.
	Cumulative Assessment 4	
26	• Using Manipulatives to Reduce Fractions • Adding and Subtracting Mixed Numbers	**CC.6.MP.4** Model with mathematics
27	• Measures of a Circle	**CC.6.MP.5** Use appropriate tools strategically
28	• Angles	**CC.6.MP.6** Attend to precision
29	• Multiplying Fractions • Reducing Fractions by Dividing by Common Factors	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
30	• Least Common Multiple (LCM) • Reciprocals	**CC.6.NS.4(2nd cluster)** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
	Cumulative Assessment 5, Benchmark 1, Performance task	
Inv. 3	• Measuring and Drawing Angles with a Protractor	**CC.6.MP.5** Use appropriate tools strategically
31	• Areas of Rectangles	**CC.6.MP.6** Attend to precision
32	• Expanded Notation • More on Elapsed Time	**CC.6.MP.7** Look for and make use of structure **CC.6.MP.6** Attend to precision
33	• Writing Percents as Fractions, Part 1	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
34	• Decimal Place Value	**CC.6.MP.7** Look for and make use of structure
35	• Writing Decimal Numbers as Fractions, Part 1 • Reading and Writing Decimal Numbers	**CC.6.MP.8** Look for and express regularity in repeated reasoning.

	Cumulative Assessment 6	
36	• Subtracting Fractions and Mixed Numbers from Whole Numbers	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
37	• Adding and Subtracting Decimal Numbers	**CC.6.NS.3 (2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
38	• Adding and Subtracting Decimal Numbers and Whole Numbers • Squares and Square Roots	**CC.6.NS.3(2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
39	• Multiplying Decimal Numbers	**CC.6.NS.3(2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
40	• Using Zero as a Placeholder • Circle Graphs	**CC.6.NS.3(2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
	Cumulative Assessment 7	
Inv. 4	• Collecting, Organizing, Displaying, and Interpreting Data	**CC.6.SP.4 (2nd cluster)** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. **CC.6.SP.1 (1st cluster)** Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. **CC.6.SP.2 (1st cluster)** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. **CC.6.SP.5a (2nd cluster)** Reporting the number of observations **CC.6.SP.5b(2nd cluster)** Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
*	**Extension Activity 4A (p 25):** • Recognizing a Statistical Question • Describing Patterns in Statistical Data	**CC.6.SP.1 (1st cluster)** Recognize a statistical question as one that anticipates variability in

	Extension Activity 4B (p 27): • Displaying Data in Box Plots	the data related to the question and accounts for it in the answers. **CC.6.SP.4 (2nd cluster)** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. CC.6.SP.5c (2nd cluster) Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
41	• Finding a Percent of a Number	**CC.6.RP.3c (1st cluster)** Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
42	• Renaming Fractions by Multiplying by 1	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
43	• Equivalent Division Problems • Finding Unknowns in Fraction and Decimal Problems	**CC.6.MP.7** Look for and make use of structure
44	• Simplifying Decimal Numbers • Comparing Decimal Numbers	**CC.6.MP.7** Look for and make use of structure
45	• Dividing a Decimal Number by a Whole Number	**CC.6.NS.3(2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
	Cumulative Assessment 8; Extension Test 2	
46	• Writing Decimal Numbers in Expanded Notation • Mentally Multiplying Decimal Numbers by 10 and by 100	**CC.6.NS.3(2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
47	• Circumference • Pi (π)	**CC.6.EE.2c (2nd cluster)** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when

		there are no parentheses to specify a particular order (Order of Operations).
48	• Subtracting Mixed Numbers with Regrouping, Part 1	**CC.6.MP.5** Use appropriate tools strategically
49	• Dividing by a Decimal Number	**CC.6.NS.3 (2nd cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
50	• Decimal Number Line (Tenths) • Dividing by a Fraction	**CC.6.MP.1** Make sense of problems and persevere in solving them
	Cumulative test 9	
Inv. 5	• Displaying Data	**CC.6.SP.4 (2nd cluster)** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. **CC.6.SP.1 (1st cluster)** Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. **CC.6.SP.2 (1st cluster)** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. **CC.6.SP.3 (1st cluster)** Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. **CC.6.SP.5c(2nd cluster)** Giving quantitative measures of center(median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. **CC.6.SP.5d(2nd cluster)** Relating the choice of measures of center and variability to the shape of the data distribution and the

		context in which the data were gathered.
*	**Extension Activity 5A (p 29):** • Using Measures of Variability **Extension Activity 5B (p 31):** • Describing the Distribution in a Set of Data	**CC.6.SP.2(1st cluster)** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape **CC.6.SP.3 (1st cluster)** Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. **CC.6.SP.5b(2nd cluster)** Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. **CC.6.SP.5c (2nd cluster)** Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. **CC.6.SP.5d(2nd cluster)** Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.
51	• Rounding Decimal Numbers	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
52	• Mentally Dividing Decimal Numbers by 10 and by 100	**CC.6.MP.7** Look for and make use of structure
53	• Decimals Chart • Simplifying Fractions	**CC.6.NS.3 (2nd Cluster)** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
54	• Reducing by Grouping Factors Equal to 1 • Dividing Fractions	**CC.6.NS.1(1st cluster)** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by

		fractions, e.g., by using visual fraction models and equations to represent the problem.
55	• Common Denominators, Part 1	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
	Cumulative Assessment 10	
56	• Common Denominators, Part 2	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
57	• Adding and Subtracting Fractions: Three Steps	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
58	• Probability and Chance	**CC.6.SP.5b (2nd cluster)** Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
59	• Adding Mixed Numbers	**CC.6.MP.2** Reason abstractly and quantitatively.
60	• Polygons	**CC.6.MP.6** Attend to precision
	Cumulative Assessment 11; Extension test 3; Benchmark 2; Performance task	
Inv. 6	• Attributes of Geometric Solids	**CC.6.G.4 (1st cluster)** Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
61	• Adding Three or More Fractions	**CC.6.MP.5** Use appropriate tools strategically
62	• Writing Mixed Numbers as Improper Fractions	**CC.6.MP.5** Use appropriate tools strategically
63	• Subtracting Mixed Numbers with Regrouping, Part 2	**CC.6.MP.8**
64	• Classifying Quadrilaterals	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
65	• Prime Factorization • Division by Primes • Factor Trees	**CC.6.MP.7** Look for and make use of structure.
	Cumulative Assessment 12	
66	• Multiplying Mixed Numbers	**CC.6.MP.1** Make sense of problems and persevere in solving them
67	• Using Prime Factorization to Reduce Fractions	**CC.6.MP.7** Look for and make use of structure
68	• Dividing Mixed Numbers	**CC.6.MP.1**

		Make sense of problems and persevere in solving them
69	• Lengths of Segments • Complementary and Supplementary Angles	**CC.6.MP.6** Attend to precision
70	• Reducing Fractions Before Multiplying	**CC.6.NS (1st cluster)** Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
	Cumulative Assessment 13	
Inv. 7	• The Coordinate Plane	**CC.6.G .3(1st cluster)** Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. **CC.6.NS.6b (3rd cluster)** Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. CC.6.NS.6c (3rd cluster) Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
*	**Extension Activity 6 (p 33):** • Finding Distances on the Coordinate Plane	**CC.6.NS.8 (3rd cluster)** Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
71	• Parallelograms	**CC.6.G.1 (1st cluster)** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these

		techniques in the context of solving real-world and mathematical problems.
72	• Fractions Chart • Multiplying Three Fractions	**CC.6.MP.7** Look for and make use of structure
73	• Exponents • Writing Decimal Numbers as Fractions, Part 2	**CC.6.EE.1 (1st cluster)** Write and evaluate numerical expressions involving whole-number exponents.
74	• Writing Fractions as Decimal Numbers • Writing Ratios as Decimal Numbers	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
75	• Writing Fractions and Decimals as Percents, Part 1	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
	Cumulative Assessment 14; Extension 4	
76	• Comparing Fractions by Converting to Decimal Form	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
77	• Finding Unstated Information in Fraction Problems	**CC.6.MP.1** Make sense of problems and persevere in solving them
78	• Capacity	**CC.6.MP.6** Attend to precision
79	• Area of a Triangle	**CC.6.G.1 (1st cluster)** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
80	• Using a Constant Factor to Solve Ratio Problems	**CC.6.RP.3a** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
	Cumulative Assessment 15	
Inv. 8	• Geometric Construction of Bisectors	**CC.6.MP.5** Use appropriate tools strategically
81	• Arithmetic with Units of Measure	**CC.6.MP.6** Attend to precision
82	• Volume of a Rectangular Prism	**CC.6.EE.2c (1st cluster)**

		Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). CC.6.G.2 (1st cluster) Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\,w\,h$ and $V = b\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
*	**Extension Activity 7 (p 35):** • Finding Volume of a Prism with Fractional Edge Lengths	**CC.6.G .2(1st cluster)** Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\,w\,h$ and $V = b\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
83	• Proportions	**CC.6.MP.4** Model with mathematics
84	• Order of Operations, Part 2	**CC.6.EE (1st cluster)** Apply and extend previous understandings of arithmetic to algebraic expressions
85	• Using Cross Products to Solve Proportions	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
	Cumulative Assessment 16	
86	• Area of a Circle	**CC.6.EE (1st cluster)** Apply and extend previous understandings of arithmetic to algebraic expressions
87	• Finding Unknown Factors	**CC.6.EE.2b (1st cluster)**

		Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. **CC.5.EE.7 (2nd cluster)** Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.
88	• Using Proportions to Solve Ratio Word Problems	**CC.6.EE.6 (2nd cluster)** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
*	**Extension Activity 8 (p 37):** • Using Tables to Compare Ratios	**CC.6.RP.3a (1st cluster)** Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
89	• Estimating Square Roots	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
90	• Measuring Turns	**CC.6.MP.6** Attend to precision
	Cumulative Assessment 17; Extension Test 5; Benchmark 3; Performance task	
Inv. 9	• Experimental Probability	**CC.6.MP.1** Make sense of problems and persevere in solving them
91	• Geometric Formulas	**CC.6.EE.2c (1st cluster)** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

92	• Expanded Notation with Exponents • Order of Operations with Exponents • Powers of Fractions	**CC.6.EE.1 (1st cluster)** Write and evaluate numerical expressions involving whole-number exponents.
93	• Classifying Triangles	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
94	• Writing Fractions and Decimals as Percents, Part 2	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
95	• Reducing Rates Before Multiplying	**CC.6.MP.2** Reason abstractly and quantitatively.
	Cumulative Assessment 18	
96	• Functions • Graphing Functions	CC.6.RP.3a (1st cluster) Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. CC.6.EE.9 (3rd cluster) Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.
*	**Extension Activity 9 (p 39):** • Analyzing the Relationship Between Dependent and Independent Variables	**CC.6.EE.9 (3rd cluster)** Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. **CC.6.EE.2a (1st cluster)** Evaluate expressions at specific values of their variables. Include

		expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
97	• Transversals	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
98	• Sum of the Angle Measures of Triangles and Quadrilaterals	**CC.6.MP.4** Model with mathematics
99	• Fraction-Decimal-Percent Equivalents	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
100	• Algebraic Addition of Integers	**CC.6.NS.5 (3rd cluster)** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. **CC.6.NS.6a (3rd cluster)** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., - (-3) **CC.6.NS.6c (3rd cluster)** Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
	Cumulative Assessment 19	
Inv. 10	• Compound Experiments	**CC.6.MP.1** Make sense of problems and persevere in solving them
101	• Ratio Problems Involving Totals	**CC.6.RP .3a (1st cluster)** Make tables of equivalent ratios relating quantities with whole-

		number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
102	• Mass and Weight	**CC.6.MP.6** Attend to precision
103	• Perimeter of Complex Shapes	**CC.6.MP.2** Reason abstractly and quantitatively.
104	• Algebraic Addition Activity	**CC.6.NS.5 (3rd cluster)** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. **CC.6.NS.6a (3rd cluster)** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., - (-3) = 3, and that 0 is its own opposite.
105	• Using Proportions to Solve Percent Problems • Two-Step Equations	**CC.6.MP.1** Make sense of problems and persevere in solving them
	Cumulative Assessment 20	
106	Two Step equations **Extension Activity 10A (p 41):** • Identifying Parts of Expressions and Generating Equivalent Expressions **Extension Activity 10B (p 43):** • Identifying Equivalent Expressions	**CC.6.EE.5(cluster 2)** Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. **CC.6.EE.7 (cluster 2)** Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x

		are all nonnegative rational numbers. **CC.6.EE.4 (1st cluster)** Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). **CC.6.EE.3(1st cluster)** Apply the properties of operations to generate equivalent expressions. **CC.6.EE.2b (1st cluster)** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. CC.6.EE.2c (1st cluster) Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
*	**Extension Activity 10A (p 41):** • Identifying Parts of Expressions and Generating Equivalent Expressions **Extension Activity 10B (p 43):** • Identifying Equivalent Expressions	**CC.6.EE.4 (1st cluster)** Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).
107	• Area of Complex Shapes	**CC.6.G.1 (1st cluster)** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of

		solving real-world and mathematical problems.
*	**Extension Activity 11 (p 45):** • Finding the Area of Trapezoids and Regular Polygons	**CC.6.G.1 (1st cluster)** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
108	• Transformations	**CC.6.NS (3rd cluster)** Apply and extend previous understandings of numbers to the system of rational numbers.
*	**Extension Activity 12 (p 47):** • Analyzing the Relationship of Points on a Coordinate Plane	**CC.6.NS.6b (3rd cluster)** Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
109	• Corresponding Parts • Similar Figures	**CC.6.MP.3** Construct viable arguments and critique the reasoning of others
110	• Symmetry	**CC.6.G (1st cluster)** Solve real-world and mathematical problems involving area, surface area, and volume.
	Cumulative Assessment 21; Extension test 6	
Inv. 11	• Scale Factor: Scale Drawings and Models	**CC.6.NS.8(3rd cluster)** Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
111	• Applications Using Division	**CC.6.MP.1** Make sense of problems and persevere in solving them
112	• Multiplying and Dividing Integers	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
113	• Adding and Subtracting Mixed Measures • Multiplying by Powers of Ten	**CC.6.MP.6** Attend to precision **CC.6.MP.7** Look for and make use of structure

114	• Unit Multipliers	**CC.6.RP.3d (1st cluster)** Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
115	• Writing Percents as Fractions, Part 2	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
	Cumulative Assessment 22; Extension test 7	
116	• Compound Interest	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
117	• Finding a Whole When a Fraction Is Known	**CC.6.MP.8** Look for and express regularity in repeated reasoning.
118	• Estimating Area	**CC.6.MP.2** Reason abstractly and quantitatively.
119	• Finding a Whole When a Percent Is Known	**CC.6.RP.3c (1st cluster)** Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
120	• Volume of a Cylinder	**CC.6.MP.6** Attend to precision
	Cumulative Assessment 23; End of course exam	
Inv. 12	• Volume of Prisms, Pyramids, Cylinders and Cones • Surface Area of Prisms and Cylinders	**CC.6.G.4 (1st cluster)** Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

***Items with an asterisk have supplemental activities supplied in the Saxon Math CCSS Companion book.**

Note: If you want more performance task activities see Saxon Materials. They can be used after every test.

After tests 30, 60, and 90 there are more in depth performance tasks

Standard Frequency

CC.6.EE (1st cluster)	14
CC.6.EE (2nd cluster)	3
CC.6.EE (3rd cluster)	1
CC.6.EE.4 (1st cluster)	1
CC.6.G (1st cluster)	8
CC.6.MP.1	9
CC.6.MP.2	6
CC.6.MP.3	6
CC.6.MP.4	4
CC.6.MP.5	10
CC.6.MP.6	12
CC.6.MP.7	12
CC.6.MP.8	20
CC.6.NS (1st cluster)	2
CC.6.NS (2nd cluster)	12
CC.6.NS (3rd cluster)	8
CC.6.RP (1st cluster)	10
CC.6.SP (2nd cluster)	5