7th Grade Math			
Sadlier - Fundamentals of Algebra			
Month	Lessons/Objectives	Applicable Standards	Resources/Materials
August	Ch.1 Integers 1-1 Integers & Absolute Value Obj.1. To identify integers and opposites Obj.2. Find the absolute value of integers 1-2 Compare & Order Integers Obj.1. Compare integers with or without number line Obj.2. Order Integers 1-3 Add Integers Obj.1. Model addition of integers Obj.2. Add like and unlike integers Obj.3. To add more than 2 integers 1-4 Subtract Integers Obj.1. Model subtraction of integers Obj.2. Subtract like and unlike integers 1-5 Multiply Integers Obj. To multiply integers with and without models 1-6 Divide Integers Obj. Divide integers with and without models 1-7 Properties Obj. Identify properties of addition and multiplication 1-9 Powers & Laws of Exponents Obj.1. Write the standard form for numbers that are given in exponential form and vice versa Obj.2. To apply the multiplication and division laws of exponents Obj.3. To identify the value of a number to the zero power Obj.4. To simplify expressions with exponents 1-10 Order of Operations Obj.To use the order of operations to simplify numerical expressions with grouping symbols and exponents 1-11 The Coordinate Plane Obj.1. To identify and graph points located in four quadrants on the x-axis and on y-axis Obj.2. To identify the quadrant or axis location of an ordered pair 1-12 Problem Solving: Strategy: Guess & Test	7.NS.1a, 7.NS.1b, 7.NS.1c, 7.NS.1d, 7.NS.3, 7.EE.3, 7.NS.2a, 7.NS.2b, 7.NS.2c	Ch. 1 Pretest SB Practice Exercises p. 2-25 PB Practice Exercises p. 1-24 Enrichment SB p.26, PB p. 25 Vocabulary Development PB p. 26 Practice Chapter 1 Test PB p. 29 Cumulative Review PB p. 31 Online: Lessons 1-6 Practice Activities Check Your Progress I (Lessons 1-6) Lessons 7-9 Practice Activities Check Your Progress II (Lesson 7-9) Lessons 10-11 Practice Activities Check Your Progress III (Lessons 10-11) Chapter 1 Test

September	Ch.2 Expressions & Equations 2-1 Mathematical Expressions Obj. To translate word phrases into numerical expressions or algebraic expressions and vice versa 2-2 Simplify and Evaluate Algebraic Expressions Obj.1. To translate verbal expressions into algebraic expressions Obj.2. To evaluate algebraic expressions Obj.3. Simplify algebraic expressions by combining like terms and by using properties 2-3 Equations Obj. To identify algebraic equations and numerical expressions 2-4 Solve Addition Equations Obj.1. To apply the Subtraction Property of Equality to solve algebraic addition equations with integers Obj.2. To combine numerical terms to simplify addition equations with integers 2-5 Solve Subtraction Equations Obj.1. To apply the Addition Property of Equality to solve algebraic subtraction equations with integers Obj.2. To combine numerical terms to simplify subtraction equations with integers 2-6 Solve Multiplication Equations Obj.1. To apply the Division Property of Equality to solve algebraic multiplication equations with integers Obj.2. To combine numerical terms to simplify multiplication equations 2-7 Solve Division Equations Obj. To apply Multiplication Property of Equality to solve algebraic division equations with integers 2-8 Solve Two-Step Equations Obj.1. To model solving two-step algebraic equations with integers Obj.2. To solve two-step algebraic equations using the properties of equality 2-9 Formulas Obj. To find missing values in problems involving formulas 2-10 Problem Solving Strategy: Organize Data Obj, To solve problems use the strategy Organize Data	7.EE.2, 7.EE.1, 7.EE.4a, 7.G.6, 7.EE.3	Ch. 2 Pretest SB Practice Exercises p. 30-49 PB Practice Exercises p. 33-52 Enrichment SB p.50-51, PB p. 53-54 Vocabulary Development PB p. 56 Practice Chapter 2 Test PB p. 57 Cumulative Review PB p. 59 Online: Lessons 1-3 Practice Activities Check Your Progress I (Lessons 1-3) Lessons 4-7 Practice Activities Check Your Progress II (Lesson 4-7) Lessons 8-9 Practice Activities Check Your Progress III (Lessons 8-9) Chapter 2 Test
October	Ch.4 Rational Numbers: Decimals 4-1 Rational Numbers Obj.1. To identify rational numbers	7.NS.2b, 7.NS.2b, 7.NS.2d, 7.NS.2a, 7.NS.3, 7.EE.3, 7.NS.2c,	Ch. 4 Pretest SB Practice Exercises p. 72-103 PB Practice Exercises p. 83-114

	Obj.2. To identify rational numbers as terminating or repeating decimals Obj.3. To locate rational numbers on a number line 4-2 Equivalent Rational Numbers Obj. To write rational numbers in equivalent forms 4-3 Compare and Order Decimals Obj.1 To compare decimals Obj.2. To order decimals 4-4 Estimate sums and differences Obj. To estimate sums and differences using rounding 4-5 Add and Subtract Decimals Obj.1. To add and subtract positive and negative numbers Obj.2. To add more than two decimals 4-6 Multiply Decimals Obj.1. To multiply positive and negative decimals Obj.2. To multiply more than two decimal factors 4-7 Estimate Decimal Products and Quotients Obj.1. To estimate decimal products and quotients by using rounding, compatible numbers, and powers of 10 4-8 Divide Decimals Obj.1. To divide positive and negative decimals Obj.2. To evaluate division expressions containing decimals 4-9 Negative Exponents Obj.1. To express powers with negative exponents as decimals Obj.2.To express decimals as powers with negative exponents 4-10 Scientific Notation Obj.1. To write the scientific notation for numbers given standard form Obj.2. To write the standard form for numbers given in scientific notation Obj.3. To compare and order numbers in scientific notation 4-11 Operations with Scientific Notation Obj.To multiply and divide numbers in scientific notation by a whole number 4-12 Addition and Subtraction Equations with Decimals Obj.1. To apply the Subtraction Property to solve addition equations with decimals Obj.2. To apply the Addition Property to solve subtraction equations with decimals 4-13 Multiplication & Division Equations with Decimals Obj.1. To apply the Division Property of Equality to solve	7.EE.3, 7.NS.1c, 7.NS.1d, 7.NS.3, 7.EE.4a	Enrichment SB p.104, PB p. 115 Vocabulary Development PB p. 116 Practice Chapter 4 Test PB p. 119 Cumulative Review PB p. 121 Online: Lessons 1-5 Practice Activities Check Your Progress I (Lessons 1-5) Lessons 6-11 Practice Activities Check Your Progress II (Lesson 6-11) Lessons 12-15 Practice Activities Check Your Progress III (Lessons 12-15) Chapter 4 Test

	multiplication equations with decimals Obj.2. To apply the Multiplication Property of Equality to division equations with decimals 4-14 Solve Two-Step Equations with Decimals Obj. To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality 4-15 Rename Metric Units of Measure Obj. To rename metric units of length, capacity, and mass 4-16 Problem Solving -Review of Strategies Obj. To solve problems using a variety of strategies		
November	Ch.5 Rational Numbers: Fractions 5-1 Prime Factorization Obj. Find the prime factorization of a number 5-2 Greatest Common Factor Obj.1. To find the greatest common factor (GCF) of 2 or more numbers Obj.2. To simplify fractions using the GCF and factoring Obj.3. To form equivalent fractions 5-3 Least Common Multiple Obj.1. To find the least common multiple (LCM) of 2 or more numbers Obj.2 To find the least common denominator (LCD) of 2 or more fractions 5-4 Fraction Sense: Close to -1, -½, 0, ½, or 1 Obj. To determine whether a fraction is close to -1, -½, 0, ½, or 1 5-5 Compare and Order Rational Numbers Obj.1 To compare and order Obj.2. To use the LCD to rename fractions Obj.3. To rename mixed numbers as fractions and vice versa Obj.4. To name a rational number between any two rational numbers Obj.5. To use cross products to compare fractions 5-6 Add and Subtract Fractions Obj. To add and subtract positive and negative fractions 5-7 Add and Subtract Mixed Numbers Obj. To add and subtract positive and negative mixed numbers 5-8 Multiply Fractions Obj.1. To multiply positive and negative fractions Obj.2. To multiply positive and negative fractions and integers	7.EE.3, 7.NS.1c, 7.NS.2a, 7.NS.2c, 7.NS.3, 7.NS.1d, 7.EE.4a, 7.EE.1	Ch. 5 Pretest SB Practice Exercises p. 108-143 PB Practice Exercises p. 123-158 Enrichment SB p.144, PB p. 159 Vocabulary Development PB p. 160 Practice Chapter 5 Test PB p. 163 Cumulative Review PB p. 165 Online: Lessons 1-5 Practice Activities Check Your Progress I (Lessons 1-5) Lessons 6-11 Practice Activities Check Your Progress II (Lesson 6-11) Lessons 12-17 Practice Activities Check Your Progress III (Lessons 12-17) Chapter 5 Test

	Obj.3. To evaluate algebraic expressions involving multiplication of fractions 5-9 Multiply Mixed Numbers Obj.1.To estimate the product of mixed numbers Obj.2. To multiply positive and negative mixed numbers Obj.3. To evaluate algebraic expressions involving multiplication of fractions and mixed numbers 5-10 Divide Fractions Obj.1. To divide positive and negative fractions Obj.2. To divide positive and negative fractions in complex fraction form 5-11 Divide Mixed Numbers Obj.1. To divide positive and negative mixed numbers Obj.2. To evaluate algebraic expressions involving division of fractions and mixed numbers Obj.3. To simplify complex fractions containing mixed numbers 5-12 Properties of Rational Numbers Obj.1. To identify properties of addition and multiplication of rational numbers Obj.2. To use the properties to compute mentally with rational numbers 5-13 Order of Operations with Rational Numbers Obj.1. To use the order of operations to simplify numerical expressions containing rational numbers Obj.2. To use a calculator to check solutions 5-14 Addition & Subtraction Equations with Fractions Obj.To apply the Subtraction and Addition Properties of Equality to solve addition and subtraction equations with fractions 5-15 Multiply and Division Equations with Fractions Obj. To apply the Division and Multiplication Properties of Equality to solve multiplication and division equations with fractions 5-16 Solve Two-Step with Equations Obj.To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the inverse Properties of Addition and Multiplication 5-17 Rename Customary Units of Measure Obj.1. To rename customary units of length, capacity, nd weight Obj.2. To compute with units of measure 5-18 Problem Solving		

	Obj. To solve problems using the strategy Make a Drawing		
December	Ch. 6 Ratio & Proportion 6-1 Ratio Obj.1. To express a ratio in different forms Obj.2. To simplify equivalent ratios Obj.3. To express ratios in simplest form 6-2 Unit Rate and Unit Cost Obj.1. To write rates Obj.2. To find unit rates Obj.3. To use unit cost to determine the better or best buy Obj.4. To compare rates 6-3 Write and Solve Proportions Obj.1. To write proportions Obj.2. To use the cross-products rules to determine whether ratios form a proportion Obj.3. To find the missing term in a proportion 6-4 Direct Proportions Obj. To understand and apply the concept of direct proportion 6-5 Proportion by Parts Obj.1. To model solutions of proportions Obj.2. To solve proportions using part-to-whole ratios 6-6 Scale Drawings and Models Obj.1. To use proportions to solve scale-drawing and scale-model problems Obj.2. To use a scale factor to make a scale-model 6-7 Similarity Obj.1. To determine similarity Obj.2. To name corresponding parts of similar figures Obj.3. To use proportions to find missing dimensions 6-8 Indirect Measurement Obj. To solve problems involving indirect measurement by using similar right triangles 6-9 Inverse Properties Obj. To solve inverse proportions 6-10 Dimensional Analysis Obj.1. To apply dimensional analysis Obj.2. To use unit ratios to convert currency, time, and Customary Units of length, capacity, and weight 6-11 Problem Solving Strategy: Solve a Simpler Problem Obj. To solve problems using the strategy *Solve a Simpler Problem*	7.RP.2a, 7.RP.1, 7.RP.2c, 7.G.1, 7.RP.2b, 7.RP.2c, 7.RP.2d, 7.RP.3, 7.NS.3	Ch. 6 Pretest SB Practice Exercises p. 149-169 PB Practice Exercises p. 167-188 Enrichment SB p.170, PB p. 189 Vocabulary Development PB p. 190 Practice Chapter 6 Test PB p. 193 Cumulative Review PB p. 195 Online: Lessons 1-3 Practice Activities Check Your Progress I (Lessons 1-3) Lessons 4-8 Practice Activities Check Your Progress II (Lesson 4-8) Lessons 9-10 Practice Activities Check Your Progress III (Lessons 9-10) Chapter 6 Test

January	Ch. 7 Percent & Consumer Applications 7-1 Percents Obj.1. To model percents Obj.2. To write percents as equivalent ratios and to write ratios as equivalent percents 7-2 Fractions, Decimals, Percents Obj.1. To write percents as fractions and decimals Obj.2. To write fractions and decimals as percents Obj.3. To compare fractions, decimals, and percents 7-3 Percents Greater Than 100%/Less Than 1% Obj.1. To write fractions and decimals greater than 1 and less than 1 hundredth as percents Obj.2. To write percents greater than 100% and less than 1% as fractions and decimals 7-4 Find a Percentage of a Number Obj.1. To use the percent formula to find a percentage of a number Obj.2. To use a percent proportion to find a percentage of a number 7-5 Find a Percent Obj. To find what percent one number is of another using the percent formula or a percent proportion 7-6 Find the Original Number or the Base Obj.1. To find a number when a percent of it is known using the percent formula or a percent proportion Obj.2. To determine whether the percentage, base, or percent is missing in a percent problem and solve the problem 7-7 Estimate with Percents Obj.1. To estimate to find percent Obj.2. To estimate a percent from a model that is not 100 units Obj.3. To estimate a percent from a three-dimensional model 7-8 Percent Increase Obj.1. To find the percent increase Obj.2. To find profit Obj.3. To find the selling price for an item sold at a profit 7-9 Percent Decrease Obj.1. To find the percent decrease Obj.2. To find the selling price for an item sold at a loss 7-10 Sales Tax and Tips Obj.1. To calculate sales tax and total cost Obj.2. To read and use a tax table	7.NS.2c, 7.RP.2C, 7.RP.3, 7.EE.2, 7.FP.3	Ch. 7 Pretest SB Practice Exercises p. 174-203 PB Practice Exercises p. 197-226 Enrichment SB p.204, PB p. 227 Vocabulary Development PB p. 228 Practice Chapter 7 Test PB p. 231 Cumulative Review PB p. 233 Online: Lessons 1-6 Practice Activities Check Your Progress I (Lessons 1-6) Lessons 7-11 Practice Activities Check Your Progress II (Lesson 7-11) Lessons 12-14 Practice Activities Check Your Progress III (Lessons 12-14) Chapter 7 Test

	Obj.3. To calculate a tip and total cost 7-11 Discount and Markup Obj.1. To find the amount of discount Obj.2. To find the sales price Obj.3. To find the discount rate Obj.4. To find the amount of markup Obj.5. To find the markup rate 7-12 Commission Obj.1. To find the amount of commission Obj.2. To find the commission rate Obj.3. To find the total sales Obj.4. To compare commissions when the total sales and commission rates are given 7-13 Simple Interest Obj.1. To find simple interest Obj.2. To find the total amount earned or due Obj.3. To find the rate of interest Obj.4. To find the time that principal is left on deposit Obj.5. To use spreadsheet software to compute simple interest 7-14 Compound Interest Obj. To compute compound interest using tables 7-15 Problem Solving Strategy: Reason Logically Obj. To solve problems using the strategy *Reason Logically*		
February	Ch.8 Data Analysis & Statistics 8-1 Samples & Surveys Obj.1. To use sampling to conduct a survey Obj.2. To make and use cumulative frequency tables to organize data Obj.3. To use a sample to predict data for an entire population 8-2 Measures of Central Tendency and Range Obj.1. To find median, mean, mode, and range Obj.2. To choose the best measure of central tendency to represent a set of data Obj.3. To find a missing value of a set of numbers 8-3 Interpret Data Obj.1. To examine how outliers in a set of data affect the mean, median, and mode Obj.2. To use range as a measure of dispersion Obj.3. To use statistics to make estimates 8-4 Choose an Appropriate Graph	7.SP.1, 7.SP.2, 7.SP.4, 7.RP.1, 7.NS.3, 7.EE.3, 7.SP.3	Ch. 8 Pretest SB Practice Exercises p. 208-235 PB Practice Exercises p. 235-262 Enrichment SB p.236-237, PB p. 263-264 Vocabulary Development PB p. 266 Practice Chapter 8 Test PB p. 267 Cumulative Review PB p. 269 Online: Lessons 1-4 Practice Activities Check Your Progress I (Lessons 1-4) Lessons 5-8 Practice Activities Check Your Progress II (Lesson 5-8) Lessons 9-12 Practice Activities Check Your Progress III (Lessons 9-12) Chapter 8 Test

	Obj.1. To select and use the appropriate types of graphs to display data 8-5 Multiple Bar Graphs Obj.To read and interpret multiple bar graphs 8-6 Histograms Obj.1. To make frequency tables using time intervals Obj.2. To make a histogram using frequency tables Obj.3. To read a histogram 8-7 Stem-and-Leaf Plots Obj. To read and make stem-and-leaf plots 8-8 Box-and-Whisker Plots Obj.1. To read and make box-and-whisker plots Obj.2. To determine and interpret clusters, quartiles, gaps, and outliers of data Obj.3. To compare 2 box-and-whisker plots on the same line 8-9 Venn Diagrams Obj. To read and make venn diagrams 8-10 Multiple Line Graphs Obj.1. To use multiple line graphs Obj.2. To interpret trends and make predictions from line graphs 8-11 Scatter Plots Obj.1. To make coordinate plane to make a scatter plot Obj.2. To read scatter plots Obj.3. To identify the type of correlation found in the data 8-12 Misleading Statistics and Graphs Obj.1 To recognize the characteristics of a misleading graph Obj.2. To recognize misleading statistics 8-13 Technology: Create Graphs Obj. To use spreadsheet software to display data in bar graphs, line graphs, or circle graphs 8-14 Problem Solving Review of Strategies Obj. To solve problems using a variety of strategies		
March	Ch. 9 Two-Dimensional Geometry 9-1 Points, Lines, and Planes Obj.1. To identify geometric figures Obj.2. To read and write symbols for geometric figures Obj.3. To identify parallel, intersecting, and perpendicular planes 9-2 Classify and Measure Angles Obj.1. To classify angles by angle measure	7.G.5, 7.G.2, 7.RP.1, 7.NS.3, 7.EE.3, 7.G.4	Ch. 9 Pretest SB Practice Exercises p. 208-235 PB Practice Exercises p. 271-298 Enrichment SB p.268-269, PB p. 299-300 Vocabulary Development PB p. 302 Practice Chapter 9 Test PB p. 303 Cumulative Review PB p. 305 Online:

	Obj.2. To describe the position of points in relation to an angle Obj.3. To use a right angle as a benchmark to estimate an angle measure Obj.4. To use a protractor to measure and draw angles 9-3 Angle Pairs Obj.1. To identify complementary, supplementary, adjacent, and vertical angles Obj.2. To find missing angle measures by solving equations 9-4 Parallel Lines and Transversals Obj.1. To identify the kinds of angles formed when a pair of parallel lines is intersected by a transversal line Obj.2. To use the properties of angle pairs and parallel lines to find missing angle measures 9-5 Congruent Angles and Line Segments Obj.1. To identify congruent angles, line segments, line segment bisectors, midpoint, perpendicular bisectors, and angle bisectors Obj.2. To construct the bisector and a given angle and a given line segment 9-6 Line Constructions Obj.1. To construct a line perpendicular to a given line through a given point not on the line Obj.2.To construct a line parallel to a given line through a given point 9-7 Polygons Obj.1. To find the exterior and interior angles of polygon Obj.2. To find the missing measure of angles of a polygon 9-8 Triangles Obj. To classify triangles by angles, by sides, and by angles and sides • To apply the concept of triangle inequality 9-9 Congruent Triangles Obj.To identify congruent triangles • To explore angle-side relations in triangles • To use congruent parts of congruent triangles to find missing angle and side measures 9-10 Triangle Construction Obj. To construct a triangle congruent to a given triangle • To construct a triangle given three line segments 9-11 Quadrilaterals Obj. To identify the properties of		Lessons 1-6 Practice Activities Check Your Progress I (Lessons 1-6) Lessons 7-10 Practice Activities Check Your Progress II (Lesson 7-10) Lessons 11-13 Practice Activities Check Your Progress III (Lessons 11-13) Ch. 9 Test

	quadrilaterals and the relationships among different types of quadrilaterals • To apply the properties of quadrilaterals in finding missing side and angle measures 9-12 Circles Obj. To identify parts of a circle • To name different kinds of arcs • To identify and find the measure of central angles and inscribed angles • To understand secants and tangents • To identify concentric, inscribed, and circumscribed circles 9-13 Make a Circle Graph Obj. To make a circle graph to display a set of data 9-14 Problem Solving Strategy: Adopt a Different Point of View Obj. To solve problems using the strategy Adopt a Different Point of View		
April	Ch. 10 Two-Dimensional Geometry and Measurement Applications 10-1 Precision & Accuracy in Measurement Obj. To find the GPE and the relative error of a measurement • To measure to a given unit of precision • To apply precision and significant digits in computations 10-2 Perimeter Obj. To use a formula to find the perimeter of a regular polygon • To find missing dimensions given the perimeter of a polygon • To find the perimeter of a complex figure • To explore how changing the dimensions of a polygon affects the perimeter 10-3 Squares & Square Roots Obj. To find the square root of a perfect square • To understand negative square roots of perfect squares • To simplify expressions involving perfect squares and square roots • To use a calculator to find square roots 10-4 Irrational Numbers Obj. To distinguish rational and irrational numbers • To approximate the square root of a number that is not a perfect square • To locate irrational numbers on a number line 10-5 Pythagorean Theorem Obj. To use the Pythagorean Theorem	7.NS.3, 7.G.6, 7.G.1, 7.G.4, 7.SP.8b, 7.G.6	SB Practice Exercises p. 272-297 PB Practice Exercises p. 307-332 Lessons 1-5 Practice Activities Check Your Progress I (Lessons 1-5) Lessons 6-8 Practice Activities Check Your Progress II (Lessons 6-8) Ch. 10 Test

	to find a missing side of a right triangle • To determine whether a given triangle is a right triangle 10-6 Area of Parallelograms Obj. To use a formula to find the area, base, or height of a parallelogram • To rename area units in equivalent forms • To explore the effect of a change in the base or the height on a parallelogram's area 10-7 Area of Triangles & Trapezoids Obj. To use a formula to find the area of a triangle • To use a formula to find the area of a trapezoid • To rename area units in equivalent forms • To find an unknown base or height given the area of a triangle or a trapezoid 10-8 Circumference and Area of a Circle Obj. To use a formula to find the circumference of a circle • To use a formula to find the area of a circle • To find the radius or diameter of a circle given its circumference or area 10-9 Area of Complex Figures Obj. To identify polygons and circles within a complex figure • To find or estimate the area of complex figures involving polygons and circles • To find missing dimensions in a complex figure given its area		
May	Ch. 12 Probability 12-1 Sample Space Obj. To determine the sample space of an experiment • To determine the likelihood of an event • To use a tree diagram to find the sample space for two events • To use a tree diagram to determine the likelihood of an event 12-2 Fundamental Counting Principal and Factorials Obj. To use the Fundamental Counting Principle to find the size of a sample space • To use factorials to find the size of a sample space 12-3 Theoretical Probability Obj. To write probabilities as fractions, decimals, and percents and represent them on a number line from 0 to 1 • To define the theoretical probability of an event and use a formula to find theoretical probability • To find the theoretical	7.SP.5, 7.SP.8b, 7.SB.8b, 7.SP.6, 7.SP.7a, 7.SP.8b	SB Practice Exercises p.330-347 PB Practice Exercises p. 373-390 Lessons 1-2 Practice Activities Check Your Progress I (Lessons 1-2) Lessons 3-6 Practice Activities Check Your Progress II (Lessons 3-6) Ch. 12 Test

	probability of complementary events		
	12-4 Experimental Probability		
	Obj. To find the experimental probability of an event • To find, record, and predict outcomes of probability experiments • To simulate events to predict probability		
	12-5 Odds & Fairness		
	Obj. To compute odds in favor and odds against • To distinguish between the two forms of odds and the language of probability • To identify fair and unfair games		
	12-6 Compound Events		
	Obj. To find the probability of independent events • To find the probability of dependent Events		