

Centerville-Abington Elementary Curriculum Mapping

Math – Excel Grade 6

1st Nine Weeks

Roderic Rinehart

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
<p>Ch.1/Les. 7, 8, 9</p> <p>Ch.7/Les. 3, 4, 5, 6.</p>	<p>6.2.10 Mental math for adding and subtracting fractions and decimals</p> <p>CCSS Math Practice</p> <p>6.NS.3 Compute fluently with multi-digit decimals</p> <p>5.C.8: Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.</p> <p>5.AT.5: Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g. by using equations to represent the problem).</p>	<p>How do you use mental math to add or subtract simple fractions and decimals?</p> <p>REAL LIFE APPLICATION. Shopping on a budget, needing to calculate the approximate cost of your items real-time.</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>None</p>	<p>Chapter 1 test Chapter 7 test</p>
<p>Ch.1/Les. 7,</p>	<p>6.2.3 Multiply and divide</p>	<p>How do you add, subtract,</p>	<p>Sadlier-Oxford Progress in</p>	<p>None</p>	<p>Chapter 1 test</p>

8, 9 Ch.2/Les. 4 Ch.3/Les. 5	decimals 6.NS.3 Compute fluently with multi-digit decimals 5.C.8: Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning. 5.AT.5: Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g. by using equations to represent the problem).	multiply, and divide multi-digit decimals using a standard algorithm for each operation?	Mathematics		Chapter 2 test Chapter 3 test
Ch.2/Les. 2 Ch.3/Les.7	6.2.9 Estimation to determine reasonable answers CCSS Math Practice 6.NS.3 Compute fluently with multi-digit decimals	How can you use estimation to decide whether answers are reasonable in decimal problems?	Sadlier-Oxford Progress in Mathematics	Estimation, round, acre, compatible numbers	Chapter 2 test Chapter 3 test
Ch.1/Les. 7, 8, 9 Ch.2/Les.4 Ch.3/Les.5	6.5.10 Compute with money in decimal notation 6.NS.3 Compute fluently with multi-digit decimals 6.NS.3 Compute fluently with multi-digit decimals 5.C.8: Add, subtract, multiply,	How do you add, subtract, multiply, and divide with money in decimal notation?	Sadlier-Oxford Progress in Mathematics	None	Chapter 1 test Chapter 2 test Chapter 3 test

	<p>and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.</p> <p>5.AT.5: Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g. by using equations to represent the problem).</p>				
Ch.3/Les.3	<p>6.NS.2 Fluency in dividing multi-digit numbers</p> <p>6.C.1: Divide multi-digit whole numbers fluently using a standard algorithmic approach.</p>	How do you divide multi-digit number using a standard algorithm?	Sadlier-Oxford Progress in Mathematics	None	Chapter 3 test
Ch.4/Les.8	<p>6.3.2 Write and use formulas to solve problems</p> <p>6.EE.7 Writing and solving equations for real world and math problems</p> <p>7.EE.4 - Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p>	How do you solve real-world and math problems by writing and solving equations?	Sadlier-Oxford Progress in Mathematics	Formula, distance formula, volume formula, perimeter formula	Chapter 4 test

	<p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following 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.</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.</p>				
Ch.4/Les.1, 3	<p>6.3.6 Apply order of operations and properties of real numbers</p> <p>6.EE.2c Evaluate expressions at specific values of their variables</p> <p>6.EE.3 Apply properties of operations to generate equivalent expressions</p>	<p>How do you evaluate expressions at specific values of variables?</p> <p>How do you apply properties of operations to generate equivalent expressions?</p>	Sadlier-Oxford Progress in Mathematics	Order of operations, brackets, parentheses, fraction bars, evaluate, terms, like terms, simplify an expression	Chapter 4 test

	<p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.2: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.</p>				
Ch.4/Les.2	<p>6.EE.2a Write expressions that record operations...</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.</p>	How do you write expressions that record operations with numbers and with letters standing for numbers?	Sadlier-Oxford Progress in Mathematics	Algebraic expression, variable	Chapter 4 test
Ch.4/Les.3	6.EE.2b Identify parts of	Can you name the parts of an	Sadlier-Oxford Progress in	Evaluate,	Chapter 4 test

	<p>expression using math terms...</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p>	<p>expression using mathematical terms, view one or more parts of an expression as a single entity?</p>	<p>Mathematics</p>	<p>simplify an expression, terms, like terms</p>	
<p>Ch.4/Les. 2, 3</p>	<p>6.3.4 Use parentheses to indicate order of operations</p> <p>6.EE.2 Write, read, evaluate expressions ...</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.</p>	<p>How do you read, write, and evaluate expressions in which letters stand for numbers? How are parentheses used to indicate which operation to perform first...?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Algebraic expression, variable, evaluate, simplify an expression, terms, like terms</p>	<p>Chapter 4 test</p>
<p>Ch.4/Les.1</p>	<p>6.EE.1 Write and evaluate numerical expressions involving whole number</p>	<p>How do you write and evaluate numerical expressions?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Order of operations, brackets,</p>	<p>Chapter 4 test</p>

	<p>exponents</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following 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.</p>			<p>parentheses, fraction bars</p>	
Ch.4/Les.2	<p>6.EE.4 Identify when two expressions are equivalent...</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following 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.</p>	<p>How do you identify two expressions when they are equivalent?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Algebraic expression, variable</p>	<p>Chapter 4 test</p>

Ch.4/Les.8	<p>6.3.9 How change relates to other changes in variables</p> <p>6.EE.9 Use variables to represent two quantities in real world...</p> <p>7.EE.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>7.EE.4 - Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following 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.</p>	How does a change in one variable relate to a change in the second variable?	Sadlier-Oxford Progress in Mathematics	Formula, distance formula, volume formula, perimeter formula	Chapter 4 test
Ch.14/Les. 8	<p>6.3.1 Write and solve one step linear equations...</p> <p>6.EE.5 Solving an equation or inequality to answer a question</p> <p>6.EE.6 Use variables to represent numbers...</p>	How do you write and solve one step linear equations and inequalities in one variable and check answers?	Sadlier-Oxford Progress in Mathematics	Linear function, function, function table, solution	Chapter 14 test

	<p>7.EE.3 - Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following 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.</p>				
Ch.14/Les. 4, 5	<p>6.3.7 Graph ordered pairs, four quadrants in coordinate plane</p> <p>6.NS.6 Rational numbers on number line 6.NS.6b Signs of numbers in ordered pairs indicating locations 6.NS.6c Find and position integers on diagrams...</p> <p>6.AF.7: Understand that signs of numbers in ordered pairs indicate the quadrant containing the point; recognize that when two ordered pairs differ only by signs, the locations of the</p>	How do you identify and graph ordered pairs in four quadrants of a coordinate plane?	Sadlier-Oxford Progress in Mathematics	Function, ordered pair, function table, function rule, coordinate plane, x-axis, y-axis, x-coordinate, y-coordinate, quadrant, coordinates, graph, coordinate axes, origin	Chapter 14 test

	<p>points are related by reflections across one or both axes. Graph points with rational number coordinates on a coordinate plane.</p> <p>6.AF.8: Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.</p>				
Ch.14/Les.8	<p>6.3.8 Linear functions with integer values</p> <p>6.EE.9 Variables to represent two quantities in real world problems...</p> <p>7.EE.4 - Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p> <p>6.NS.2: Understand the integer number system. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of</p>	How do you solve problems involving linear functions with integer values?	Sadlier-Oxford Progress in Mathematics	Function, function table, linear function, solution	Chapter 14 test

	the opposite of a number is the number itself (e.g., $-(-3) = 3$), and that 0 is its own opposite.				
Ch.14/Les. 5, 6, 7	6.G.3 Polygons and coordinate planes... 6.AF.8: Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	How do you draw polygons in a coordinate plane given coordinate for vertices? How do you use a coordinate to find the length of a side to join parts with the same first coordinate or same second coordinate?	Sadlier-Oxford Progress in Mathematics	Coordinate plane, x-axis, y-axis, coordinate axes, origin, quadrant, ordered pair, coordinates, x-coordinate, y-coordinate, graph, reflection, line of reflection, image, prime notation, transfer, rotate, center of rotation, rotate image point	Chapter 14 test

Problem solving throughout year

- Ch.1/Les. 12, 13
- Ch.2/Les.7, 8
- Ch.3/Les. 13, 14
- Ch.4/Les. 10, 11
- Ch.7/Les. 10
- Ch.14/Les. 10, 11

Curriculum Mapping
Math – Excel Grade 6
 2nd Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Ch.5/Les.1	<p>6.1.1 Negative numbers</p> <p>6.NS.5 Positive and negative numbers</p> <p>7.NS.1.a - Describe situations in which opposite quantities combine to make 0.</p> <p>7.NS.1.b - Understand $p + q$ as the number located a distance q from p, in the positive or negative direction depending on whether q is positive or negative.</p> <p>7.NS.1.c - Understand subtraction of rational numbers as adding the additive inverse</p> <p>7.NS.1.d - Apply properties of operations as strategies to add and subtract rational numbers.</p> <p>6.NS.1: Understand that positive and negative numbers are used 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</p>	<p>How can you apply the basic concept of negative numbers?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Integer, positive integer, negative integer, opposites, additive inverses, absolute value</p>	<p>Chapter 5 test</p>

	<p>numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p>6.NS.2: Understand the integer number system. 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.</p>				
Ch.5/Les. 1, 2	<p>6.1.2 Absolute value</p> <p>6.NS.6a Opposite signs of numbers on number line</p> <p>7.NS.1.c - Understand subtraction of rational numbers as adding the additive inverse</p> <p>6.NS.4: Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p>	<p>How do you interpret absolute value of numbers as distance from zero on number line and find absolute value of real numbers?</p> <p>REAL LIFE APPLICATION. Thermometers, football plays, stock market values, borrowing money, digging below ground in Minecraft.</p>	Sadlier-Oxford Progress in Mathematics	Integer, positive integer, negative integer, opposites, additive inverses, absolute value	Chapter 5 test
Ch.5/Les. 3, 4	6.2.1 Add and subtract integers	How do you add and subtract positive and negative numbers?	Sadlier-Oxford Progress in	Integers with like signs, integers with unlike	Chapter 5 test

	7.NS.1 Add and subtract rational numbers		Mathematics	signs, opposite of an integer	
Ch.5/Les.2 Ch.6/Les. 8, 10 Ch.1/Les.4	6.1.3 Compare and represent variety of numbers on number line 6.NS.7a Inequality statements 7.NS.1 Add and subtract rational numbers 6.NS.1: Understand that positive and negative numbers are used 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 and compare quantities in real-world contexts, explaining the meaning of 0 in each situation. 6.NS.4: Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	How can you compare and represent on a number line positive and negative integers, fractions, decimals, and mixed numbers?	Sadlier-Oxford Progress in Mathematics	Close to zero, close to half, close to one, like denominators, unlike denominators	Chapter 1 test Chapter 5 test Chapter 6 test
Ch.5/Les.5, 6	6.2.2 Compute positive and negative numbers	How do you multiply and divide positive and negative numbers?	Sadlier-Oxford Progress in	None	Chapter 5 test

	7.NS.2a Fractions to rational numbers		Mathematics		
Ch.5/Les.9	6.5.9 Temperature	How do you use formulas to convert degrees Celsius to degrees Fahrenheit?	Sadlier-Oxford Progress in Mathematics	Degrees Celsius, degrees Fahrenheit	Chapter 5 test
Ch.5/Les. 1. 2	6.NS.7d Absolute value and order 7.NS.1.c - Understand subtraction of rational numbers as adding the additive inverse	How do you distinguish comparisons of absolute value from statements about order?	Sadlier-Oxford Progress in Mathematics	Integer, positive integer, negative integer, opposites, additive inverses, absolute value	Chapter 5 test
Ch.6/Les. 12, 13, 14	6.1.4 Convert between two representations of numbers 6.RP.3c Percent of quantity	How do you express fractions and mixed numbers whose denominators are powers of 10 as decimals? How do you express decimals as fractions or mixed numbers with denominators that are powers of 10?	Sadlier-Oxford Progress in Mathematics	Powers of 10	Chapter 6 test
Ch.6/Les. 16	6.NS.7 Absolute value 7.NS.1.c - Understand subtraction of rational numbers as adding the additive inverse	How do you order and figure out absolute value of rational numbers?	Sadlier-Oxford Progress in Mathematics	Rational numbers	Chapter 6 test
Ch.6/Les. 16	6.NS.7b Rational numbers in real world context 7.NS.3 - Solve real-world and mathematical problems involving the four operations with rational numbers.	How do you write, interpret, and explain statements of order for rational numbers in real-world contexts?	Sadlier-Oxford Progress in Mathematics	Rational numbers	Chapter 6 test
Ch.6/Les. 16	6.NS.7c Absolute value and distance on number line... 6.NS.2: Understand the integer number system. Recognize opposite signs of numbers as	How do you identify rational numbers and their opposites and show rational numbers on a number line?	Sadlier-Oxford Progress in Mathematics	Rational numbers	Chapter 6 test

	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.				
Ch.6/Les. 12, 13, 14 Ch.11/Les.1 0, 11, 12	6.1.4 Convert between two representations of numbers 6.RP.3c Percent of quantity	How do you convert between any two representations of numbers (fractions, decimals, and percents) without the use of a calculator?	Sadlier-Oxford Progress in Mathematics	Powers of 10, percent (%), decimal percent	Chapter 6 test Chapter 11 test
Ch.6/Les. 5, 9	6.1.7 Least common multiple and greatest common factor 6.NS.4 Greatest common factor and least common multiple... 6.NS.7: 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 from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.	How do you find LCM and GCF of whole numbers? Can you use these to solve problems with fractions?	Sadlier-Oxford Progress in Mathematics	Common factors, Greatest common factor (GCF), least common multiple (LCM), prime factorization, greatest common denominator (GCD), common multiple, multiple	Chapter 6 test
Ch.7/Les. 11 Ch.8/Les. 18	6.2.5 Problem solving with positive fractions 6.NS.1 Interpret and compute quotients of fractions... 6.C.2: Compute with positive	How do you solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why particular operation was used for a given situation?	Sadlier-Oxford Progress in Mathematics	Bushel	Chapter 7 test Chapter 8 test

	fractions and positive decimals fluently using a standard algorithmic approach.				
Ch.7/Les. 11 Ch.1/Les. 7, 8, 9	6.2.10 Mental math to compute simple fractions and decimals CCSS Math Practice 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you use mental math to add or subtract simple fractions and decimals?	Sadlier-Oxford Progress in Mathematics	Break apart, compensate	Chapter 7 test Chapter 1 test
Ch.8/Les. 14	6.6.4 Compound events and theoretical probability 7.SP.8 Probability using organized lists, tables, tree diagrams, and simulations	Can you show all possible outcomes for compound events in organized way and find theoretical problems for each outcome?	Sadlier-Oxford Progress in Mathematics	Compound event, tree diagram, Counting Principle, independent events, dependent events	Chapter 8 test
Ch.8/Les. 16	6.6.5 Data to estimate probability 7.SP.6 Probability of a chance... 7.SP.7 Probability models	Can you use data to estimate probability of future events? REAL LIFE APPLICATION. Tracking the probability of the lottery, lightning strikes, making the NFL or NBA, becoming a millionaire, graduating from college, living to be 100, becoming a movie star, becoming a musician, making your own video game.	Sadlier-Oxford Progress in Mathematics	Odds, odds in favor, odds against	Chapter 8 test
Ch.8/Les. 1, 2, 4, 6, 8	6.2.4 Multiply & divide positive fractions and perform calculations 6.NS.1 Interpret and compute quotients of fractions and solve real world problems...	Can you explain how to multiply and divide positive fractions and perform the calculations?	Sadlier-Oxford Progress in Mathematics	None	Chapter 8 test
Ch.11/Les. 12	6.1.5 Decimal equivalents 4.NF.6 Decimal notation for	How do you recognize decimal equivalents for commonly used fractions without use of a calculator?	Sadlier-Oxford Progress in Mathematics	Decimal percent	Chapter 11 test

	<p>fractions with denominators of 10 or 100</p> <p>6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.</p>				
Ch.8/Les. 13	<p>6.6.6 Probabilities as ratios, relative frequency...</p> <p>7.SP.5 Probability of chance event has number between 0 and 1</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>	How can you understand and represent probability as ratios, measures of relative frequency, decimals between zero and one, percent between zero and 100, and verify probability computed are reasonable?	Sadlier-Oxford Progress in Mathematics	Probability, event, impossible, certain, theoretical probability, outcome, sample space, complementary events, mutually exclusive events, disjoint events, experimental probability, trial	Chapter 8 test
Ch.11/Les. 1, 2	<p>6.1.6 Models to represent ratios</p> <p>6.RP.3 Ratio and rate reasoning to solve real world problems</p>	Can you use models to represent ratios?	Sadlier-Oxford Progress in Mathematics	Ratio, terms, simplest form, equivalent ratios, equivalent fractions	Chapter 11 test

	<p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>				
Ch.11/Les.1, 2	<p>6.2.6 Ratios to show relative sizes</p> <p>6.RP.1 Ratio and appropriate language...</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the</p>	<p>Can you interpret and use ratios to show relative sizes of two quantities?</p> <p>REAL LIFE APPLICATION. Using data from class on lunches (A/B/C/S/P) or grades (A/B/C/D/F) to show relative sizes comparing each of them for that day or nine weeks.</p>	Sadlier-Oxford Progress in Mathematics	Ratio, terms, simplest form, equivalent ratios, equivalent fractions	Chapter 11 test

	<p>dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>				
<p>Ch.11/Les. 4, 5, 6</p>	<p>6.2.7 Proportions</p> <p>6.RP.3a Tables of equivalent ratios...</p> <p>7.RP.2.b - Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>	<p>How can you understand proportions and use them to solve problems?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Proportion, extremes, means, cross-product rules, reciprocal</p>	<p>Chapter 11 test</p>

Ch.11/Les. 3	<p>6.RP.3b Unit rate problems</p> <p>7.RP.1 - Compute unit rates</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>	<p>Can you solve unit rate problems including those involving unit price and constant speed?</p>	Sadlier-Oxford Progress in Mathematics	Rate, unit rate, unit price	Chapter 11 test
Ch.12/Les. 4	<p>6.RP.2 Unit rate...</p> <p>7.RP.1 - Compute unit rates</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world</p>	<p>Can you understand the concept of unit rate associated with ratio and use rate language in context of ratio relationships?</p> <p>REAL LIFE APPLICATION. Going to the grocery store and finding 10 items sold in bulk or multi-packs and sold individually and then comparing the unit rate for each item or ounce.</p>	Sadlier-Oxford Progress in Mathematics	Rate	Chapter 12 test

	problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.				
Ch.12/Les. 7, 10, 11	6.2.8 Discounts at sales, interest, tips 6.RP.3c Percent of quantity	Can you calculate a given percentage of quantity and solve problems involving discount at sales, interest earned, and tips?	Sadlier-Oxford Progress in Mathematics	Discount, list price, rate of discount, sale price, commission, rate of commission, straight commission, interest, principle, simple interest, rate of interest	Chapter 12 test

Problem solving throughout year

- Ch.5/Les. 10, 11
- Ch.6/Les. 18, 19
- Ch.7/Les. 10, 11
- Ch.8/Les. 17, 18
- Ch.11/Les. 15, 16

Curriculum Mapping
Math – Excel Grade 6
 3rd Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Ch.9/Les. 4, 8	<p>6.6.1 Graph, stem-and-leaf plots</p> <p>6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. 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.</p> <p>6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.</p> <p>6.DS.3: Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).</p>	How can you organize and display a single variable data in apply graph, and stem-and-leaf plots, and explain which types of graphs are appropriate for various data sets?	Sadlier-Oxford Progress in Mathematics	Frequency, cumulative frequency table, tally marks, cumulative frequency, total frequency, ungrouped frequency, related frequency, stem-and-leaf plot	Chapter 9 test
Ch.9/Les. 4, 9, 13	<p>6.6.2 Frequency tables</p> <p>6.SP.4 Number line, dot plots, histograms, box plots</p>	Can you make frequency tables for numerical data, understand and find relative and cumulative frequency?	Sadlier-Oxford Progress in Mathematics	Frequency, cumulative frequency table, tally marks, cumulative	Chapter 9 test

<p>6.SP.5a Reporting observations</p> <p>6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. 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.</p> <p>6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.</p> <p>6.DS.3: Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).</p> <p>6.DS.4: Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), as well as describe any overall</p>	<p>Can you use histograms of data and related frequency distribution and broken line graph for cumulative frequency?</p> <p>REAL LIFE APPLICATION. Making a histogram for each chapter test up to this point, showing the A/B/C/D/F.</p>		<p>frequency, total frequency, ungrouped frequency, related frequency, stem-and-leaf plot, histogram, line graph, trend</p>	
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	<p>pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered; and relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.</p>				
Ch.9/Les. 5	<p>6.6.3 Mean, median, mode</p> <p>6.SP.5c Patterns with measures of center and variability</p> <p>6.SP.2 Statistical questions</p> <p>6.SP.5d Choice of measures of center and variability to shape...</p> <p>6.SP.3 Measure of center</p> <p>7.SP.3 - Draw informal comparative inferences about two populations.</p> <p>6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. 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.</p> <p>6.DS.2: Select, create, and interpret graphical representations of numerical data, including line</p>	<p>Can you compare mean, median, mode for a set of data and explain which measurement is most appropriate in given context?</p> <p>REAL LIFE APPLICATION. Finding a sports player and calculating their mean, median, mode for their points, assists, rebounds, touchdowns, birdies, aces, victories, or whatever stat you choose.</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Mean, median, mode, measure of central tendency, range</p>	<p>Chapter 9 test</p>

	<p>plots, histograms, and box plots.</p> <p>6.DS.3: Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).</p> <p>6.DS.4: Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered; and relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.</p>				
Ch.9/Les. 1, 2	<p>6.SP.1 Statistical question...</p> <p>6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers.</p>	Can you recognize a statistical question as one anticipates variability in data related to the question and accountability for it in the answers?	Sadlier-Oxford Progress in Mathematics	Survey, population, sample, representative sample, random sample, convenience sampling, response to survey	Chapter 9 test

	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.				
Ch.9/Les. 6, 12	6.SP.5b Nature of attribute... 6.DS.4: Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered; and relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.	Can you describe the nature of attributes under investigation, including how to measure and units of measure?	Sadlier-Oxford Progress in Mathematics	Line plot, clusters, gaps, outliers, misleading, expanded scale	Chapter 9 test
Ch.10/ Les. 3	6.4.2 Angle properties 7.G.5 Different angles to solve multi-step problems	Can you use properties of complementary, supplementary, and vertical angles to solve problems involving unknown angles and justify solutions?	Sadlier-Oxford Progress in Mathematics	Complementary angles, complementary, supplementary angles, supplementary, adjacent angles, linear pair, vertical angles	Chapter 10 test

Ch.10/ Les.3	6.4.1 Angles and angle relationships 7.G.5 Different angles to solve multi-step problems	Can you identify and draw vertical, adjacent, complementary, and supplementary angles, and describe these angle relationships?	Sadlier-Oxford Progress in Mathematics	Complementary angles, complementary, supplementary angles, adjacent angles, linear pair, vertical angles	Chapter 10 test
Ch.10/ Les. 8, 9	6.4.3 Quadrilaterals and triangles 7.G.2 Draw geometric shapes with sizes given 6.GM.3: 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 to solve real-world and other mathematical problems.	Can you draw quadrilaterals and triangles from given information about them?	Sadlier-Oxford Progress in Mathematics	Equilateral triangle, isosceles triangle, scalene triangle, acute triangle, obtuse triangle, right triangle, isosceles right triangle, scalene obtuse triangle, congruent triangle, quadrilateral, trapezoid, rhombus, rectangle, square, parallelogram	Chapter 10 test
Ch.10/ Les. 10	6.4.4 Interior angles 8.G.5 Informal arguments to establish facts... 6.GM.2: Know that the sum of the interior angles of any triangle is 180o and that the sum of the interior angles of any quadrilateral is 360o. Use this information to solve real-world and mathematical problems.	Can you understand the sum of interior angles of any triangle is 180 degrees and the sum of interior angles of any quadrilateral is 360 degrees?	Sadlier-Oxford Progress in Mathematics	Interior angles of triangle, exterior angles of triangle	Chapter 10 test
Ch.10/ Les. 13	6.4.5 Two-dimensional shapes 8.G.5 Informal arguments to establish facts...	Can you identify and draw 2D shapes that are similar?	Sadlier-Oxford Progress in Mathematics	Congruent, similar, congruent polygons, similar polygons, corresponding parts,	Chapter 10 test

				corresponding angles	
Ch.10/ Les. 14	6.4.6 Translations, reflections 8.G.2 Two-dimensional figures and congruent...	Can you draw translations, and reflections of shapes?	Sadlier-Oxford Progress in Mathematics	Transformation, image, translation, slide, reflection, flip, rotation, turn, translation image, translation arrow, line of reflection, reflection image, rotation arrow	Chapter 10 test
Ch.13/ Les. 8, 9, 10	6.3.5 Geometric quantities 6.G.1 Area of shapes 6.G.2 Volume of right rectangular prism 6.GM.4: Find the area of complex shapes composed of polygons by composing or decomposing into simple shapes; apply this technique to solve real-world and other mathematical problems.	How do you use variables in expressions describing geometric quantities?	Sadlier-Oxford Progress in Mathematics	Perimeter, area, square unit, base, height, perpendicular, segment, lower base, upper base	Chapter 13 test
Ch.13/ Les. 1, 3	6.5.1 Standard units and tools 6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.	Can you select and apply appropriate standard units and tools to measure length, area, volume, time, weight, temperature, and size of angles?	Sadlier-Oxford Progress in Mathematics	Tools, inches ruler, yardstick, odometer, inches, feet, yards, miles, fluid ounces, cups, pints, quarts, gallons, weight, ounce, pounds, Ton (T)	Chapter 13 test
Ch.13/ Les. 9, 10, 11	6.5.3 Units for measuring area 6.G.1 - area	Can you understand and use large units for measuring area by comparing acres and square miles to square yards and square kilometers to square meters?	Sadlier-Oxford Progress in Mathematics	Area, square units, base, height, perpendicular segment, lower base, upper base	Chapter 13 test
Ch.13/	6.5.4 Constant Pi	Do you understand the concept of	Sadlier-Oxford	Circumference,	Chapter 13 test

Les. 12, 13	6.G.1 - area 7.G.4 Area and circumference	constant pi as ratio of circumference to diameter of a circle? Can you develop and use formulas for circumference and area of circle?	Progress in Mathematics	diameter, radius, formulas for circumference, area of circle, formula to find area of circle	
Ch.13/ Les. 12, 13	6.5.5 Common estimates for Pi 7.G.4 Area and circumference	Do you know common estimates of pi and use values (3.14, 22/7) to estimate and calculate circumference and area of a circle?	Sadlier-Oxford Progress in Mathematics	Circumference, diameter, radius, formulas for circumference, area of circle, formula to find area of circle	Chapter 13 test
Ch.13/ Les. 21	6.5.6 Significant figures 7.G.4 Area and circumference	Do you understand concept of significant figures and round answers to appropriate numbers of significant figures?	Sadlier-Oxford Progress in Mathematics	None	Chapter 13 test
Ch. 13/ Les. 14, 16, 17	6.5.8 Surface area and volume... 6.G.2 Volume of right rectangular prism...	Can you use strategies to find surface area and volume of right prisms and cylinders using appropriate units? REAL LIFE APPLICATION. Using wrapping paper for presents. How much to buy for the gift you have chosen?	Sadlier-Oxford Progress in Mathematics	Surface area, volume, cubic unit, triangular prism, cylinder	Chapter 13 test
Ch.13/ Les. 14	6.5.7 Surface area 6.G.4 Three-dimensional figures...	How do you construct a cube and rectangular box from 2D patterns and use patterns to compute surface area of these objects?	Sadlier-Oxford Progress in Mathematics	Surface area	Chapter 13 test

Problem solving throughout year

Ch.9/Les. 15, 16

Ch.10/Les. 19, 20

Ch.13/Les. 6, 19, 20

Curriculum Mapping
Math – Excel Grade 6
 4th Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Ch.1/Les. 1	4.NBT.3 Round multi-digit whole numbers to any place 6.NS.3: Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.	Can you read and write whole numbers through trillions using place value? Can you read and write decimal numbers to millionths using place value?	Sadlier-Oxford Progress in Mathematics	Period, trillions, standard form, word name, place, decimal point	Chapter 1 test
Ch.1/Les.2	4.NBT.3 Round multi-digit whole numbers to any place	Can you write expanded form of whole numbers to trillions and decimal numbers to millionths?	Sadlier-Oxford Progress in Mathematics	Expanded form, standard form	Chapter 1 test
Ch.1/Les.3	6.C.5: Evaluate positive rational numbers with whole number exponents.	Can you write exponential expressions in standard form? Can you write expanded form of numbers using exponential and vice versa?	Sadlier-Oxford Progress in Mathematics	Exponent, base, power, positive powers of 10, negative powers of 10	Chapter 1 test
Ch.1/Les. 5	4.NBT.3 Round multi-digit whole numbers to any place	How do you round whole numbers and decimals to particular place and to greatest place?	Sadlier-Oxford Progress in Mathematics	Rounded number, rounding	Chapter 1 test
Ch.1/Les. 6	5.2.6 Estimation and reasonable answers	How do you use front-end estimation or rounding to estimate decimal sums and differences including money amounts?	Sadlier-Oxford Progress in Mathematics	Front end estimation, rounding	Chapter 1 test

Ch.1/Les. 10	5.OA.2 Expressions 6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.	How do you write word expressions as numerical expressions and vice versa? How do you write word expressions and vice versa?	Sadlier-Oxford Progress in Mathematics	Numerical expression, variable, algebraic expression, equation	Chapter 1 test
Ch.1/Les. 11	6.3.1 One-step linear equations and inequalities 6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p , q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.	How do you find value of algebraic expressions involving addition or subtraction?	Sadlier-Oxford Progress in Mathematics	Evaluate	Chapter 1 test
Ch.2/Les. 1	5.2.1 Whole number multiplication and division 5.C.1: Multiply multi-digit whole numbers fluently using a standard algorithmic approach.	How do you multiply a whole number by power of 10 or multiple of 10 and multiply a decimal by power of 10?	Sadlier-Oxford Progress in Mathematics	Multiple, multiplicand, multiplier, product	Chapter 2 test
Ch.2/Les.3	5.2.1 Whole number multiplication and division	How do you multiply with zero in one or more whole number factors?	Sadlier-Oxford Progress in Mathematics	Partial product, distributive property	Chapter 2 test
Ch.2/Les.5	7.1.4 Whole number powers and whole numbers	Can you rename numbers expressed in exponential form, factor form, and standard form?	Sadlier-Oxford Progress in Mathematics	Exponent, base, power, exponential form	Chapter 2 test

Ch.2/Les. 6	7.1.1 Scientific notation	Can you write a larger whole number in scientific notation? Can you write a number exponent in scientific notation as a whole number?	Sadlier-Oxford Progress in Mathematics	Scientific notation, exponent, powers of 10	Chapter 2 test
Ch.3/Les.1	5.C.2: Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning used.	Can you use short division to find quotients? Can you use divisibility rules to predict if quotient will have remainder?	Sadlier-Oxford Progress in Mathematics	Short division, divisibility rules, quotient	Chapter 3 test
Ch.3/Les.2	5.2.6 Estimation and reasonable answers	Can you estimate quotients using compatible numbers?	Sadlier-Oxford Progress in Mathematics	Compatible numbers	Chapter 3 test
Ch.3/Les. 4, 6	6.2.3 Decimals 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	Can you divide decimal by powers of 10 and write decimals less than one in scientific notation? Can you divide whole numbers and decimals by .1, .01, and .001?	Sadlier-Oxford Progress in Mathematics	Negative exponents	Chapter 3 test
Ch.3/Les. 8, 9	6.2.3 Decimals 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you divide decimals by decimals? How do you divide decimals by inserting zeros in dividend or quotient?	Sadlier-Oxford Progress in Mathematics	None	Chapter 3 test
Ch.3/Les. 10, 11	7.3.1 Using variables and appropriate operations...	Can you write word expressions as numerical multiplication and division	Sadlier-Oxford Progress in	Expression, numerical expression,	Chapter 3 test

	<p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p> <p>6.AF.6: Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.</p>	<p>expressions and vice versa? Can you write algebraic multiplication and division expressions and vice versa? How do you find value of algebraic expressions involving multiplication and division?</p>	Mathematics	<p>multiplication expression, division expression, algebraic expression, variable, evaluate</p>	
Ch.3/Les. 12	5.1.2 Round numbers and decimals	How do you round decimal quotients to nearest tenth, hundredth, thousandth, and cent?	Sadlier-Oxford Progress in Mathematics	Round	Chapter 3 test
Ch.4/Les.4	7.3.1 Use variables and appropriate operations... 7.3.2 Two-step linear equations and inequalities	How do you translate word sentences into equations and inequalities? How do you determine whether equation or inequality is true or false? How do you determine whether a given value is a solution of an equation or inequality?	Sadlier-Oxford Progress in Mathematics	Equation, solution, inequality, open sentence, closed sentence, true statement, false statement	Chapter 4 test

Ch.4/Les. 5, 6	<p>6.3.1 One-step linear equations and inequalities</p> <p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p> <p>6.AF.6: Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem.</p> <p>Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.</p>	<p>How do you solve addition equations using subtraction property of equality? How do you solve algebraic subtraction equations using addition property of equality when minuend is unknown? How do you solve algebraic subtraction equation using related sentence when subtrahend is unknown?</p>	Sadlier-Oxford Progress in Mathematics	Inverse operation, addition equation, subtraction property of equality, subtraction equation, addition property of equality	Chapter 4 test
Ch.4/Les.7	<p>6.3.1 One-step linear equations and inequalities</p> <p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p>	<p>How do you solve algebraic multiplication equations using division property of equality? How do you solve algebraic division equation using multiplication property of equality when dividend is unknown?</p>	Sadlier-Oxford Progress in Mathematics	Multiplication equation, division equation, multiplication property of equality, division property of equality	Chapter 4 test

	<p>6.AF.6: Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem.</p> <p>Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.</p>				
Ch.5/Les.8	<p>7.EE.3 Solve problems with rational numbers</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.</p>	Can you evaluate algebraic expressions involving integers? Can you solve equations involving integers?	Sadlier-Oxford Progress in Mathematics	Replacement set	Chapter 5 test
Ch.5/Les.7	<p>7.3.4 Numerical and algebraic expressions</p> <p>6.AF.2: Apply the properties of operations (e.g., identity, inverse, commutative,</p>	Can you evaluate algebraic expressions involving integers using order of operations?	Sadlier-Oxford Progress in Mathematics	None	Chapter 5 test

	associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.				
Ch.6/Les.1	6.C.1: Divide multi-digit whole numbers fluently using a standard algorithmic approach.	How do you use divisibility rules for 2, 3, 4, 5, 6, 8, 9, and 10?	Sadlier-Oxford Progress in Mathematics	Divisible	Chapter 6 test
Ch.6/Les.2	5.1.6 Prime and composite numbers 6.NS.6: Identify and explain prime and composite numbers.	Can you identify prime and composite numbers?	Sadlier-Oxford Progress in Mathematics	Prime number, factor, composite number, perfect number	Chapter 6 test
Ch.6/Les.3	7.1.5 Prime factorization 6.NS.6: Identify and explain prime and composite numbers.	Can you find prime factorization of composite numbers?	Sadlier-Oxford Progress in Mathematics	Prime factor, prime factorization, factor tree, exponent	Chapter 6 test
Ch.6/Les.4	4.1.5 Fractions 6.NS.5: Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator.	How do you find equivalent fractions?	Sadlier-Oxford Progress in Mathematics	Equivalent fractions	Chapter 6 test
Ch.6/Les.6		How do you express fractions in simplest form?	Sadlier-Oxford Progress in Mathematics	Simplest form, lowest terms	Chapter 6 test

Ch.6/Les.7	4.1.6 Mixed numbers 4.1.7 Mixed numbers, improper fractions	Can you read and write mixed numbers? Can you rename a mixed number as an improper fraction and vice versa?	Sadlier-Oxford Progress in Mathematics	Mixed number, improper fraction	Chapter 6 test
Ch.6/Les. 15	7.1.7 Decimals and fractions	Can you express fractions and mixed numbers as terminating or repeating decimal?	Sadlier-Oxford Progress in Mathematics	Terminating decimal, repeating decimal	Chapter 6 test
Ch.6/Les. 17	7.1.2 Rational and irrational numbers 6.NS.3: Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.	Can you compare and order rational numbers?	Sadlier-Oxford Progress in Mathematics	None	Chapter 6 test
Ch.7/Les. 1	5.2.2 Fractions and mixed numbers 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	Can you apply addition properties to computations with fractions?	Sadlier-Oxford Progress in Mathematics	Commutative, associative, identity, inverse properties of addition	Chapter 7 test
Ch.7/Les.2	5.NF.2	How do you estimate sums and differences of fractions and mixed numbers?	Sadlier-Oxford Progress in Mathematics	None	Chapter 7 test
Ch.7/Les.8	5.NF.2	How do you evaluate addition and subtraction expressions with fractions?	Sadlier-Oxford Progress in Mathematics	None	Chapter 7 test
Ch.7/Les.9	5.NF.2	How do you solve addition and subtraction equations involving fractions?	Sadlier-Oxford Progress in Mathematics	None	Chapter 7 test
Ch.8/Les.3	6.NS.1 Interpret and compute quotients of fractions...	How do you use multiplication property with fractions? How do you find the reciprocal of a number?	Sadlier-Oxford Progress in Mathematics	Reciprocal, inverse property of multiplication,	Chapter 8 test

	6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.			commutative property, associative property, identity property, zero property, distributive property of multiplication over addition	
Ch.8/Les.7	6.NS.1 Interpret and compute quotients of fractions... 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you estimate quotients of two fractions by comparing dividend and divisor? How do you estimate quotients of mixed numbers by rounding each mixed number to nearest compatible whole number?	Sadlier-Oxford Progress in Mathematics	None	Chapter 8 test
Ch.8/Les.9	6.NS.1 Interpret and compute quotients of fractions... 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you apply order of operations to fraction computation? How do you simplify using the distributive property over subtraction?	Sadlier-Oxford Progress in Mathematics	Distributive property over subtraction	Chapter 8 test
Ch.8/Les. 10	6.NS.1 Interpret and compute quotients of fractions... 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you multiply and divide money amounts by fractions? REAL LIFE APPLICATION. Find money amounts in your life or your parents; lives that needed to be divided by fractions and apply what you have learned to that real life money situation.	Sadlier-Oxford Progress in Mathematics	None	Chapter 8 test
Ch.8/Les. 11	6.NS.1 Interpret and compute quotients of fractions... 6.C.2: Compute with positive fractions and positive decimals fluently using a standard	How do you evaluate multiplication and division expressions with fractions?	Sadlier-Oxford Progress in Mathematics	None	Chapter 8 test

	algorithmic approach.				
Ch.8/Les. 12	6.5.9 Temperature 6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	How do you solve multiplication and division equations with fractions? How do you convert degrees Celsius to degrees Fahrenheit and vice versa?	Sadlier-Oxford Progress in Mathematics	Convert, temperature, conversion formulas	Chapter 8 test
Ch.8/Les. 13	6.6.4 Compound events, theoretical probability	How do you find the theoretical probability of an event and complement? How do you compare experimental probability of an event with theoretical probability?	Sadlier-Oxford Progress in Mathematics	Disjoint events, experimental probability, trial, probability, event, impossible, certain, theoretical probability, outcome, sample space, complementary event, mutually exclusive events	Chapter 8 test
Ch.8/Les. 15		How do you find all permutations and combinations for a set?	Sadlier-Oxford Progress in Mathematics	Order, permutations, combinations, factorial	Chapter 8 test
Ch.9/Les. 3	8.6.2 Samples and bias 6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. 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.	Can you identify bias in a sample, question, or display? REAL LIFE APPLICATION. Find actual data displays in real life advertisements that have biased questions or displays. Explain how it is biased. Explain how it could be fixed.	Sadlier-Oxford Progress in Mathematics	Bias, sample, bias question, bias display	Chapter 9 test
Ch.9/Les. 7	8.6.4 Bar graphs, line graphs,	Can you interpret box and whisker	Sadlier-Oxford	Box and whisker	Chapter 9 test

	circle graphs, stem-and-leaf plots, box and whisker plots 6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	plots? Can you make box and whisker plots to show distribution of data?	Progress in Mathematics	plots, extremes, quartile, upper quartile, lower quartile, box, whiskers	
Ch.9/Les. 10	7.6.1 Bar graphs, line graphs, circle graphs, stem-and-leaf plots 6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	Can you interpret and make double line graphs? REAL LIFE APPLICATION. Make a double line graph for all all your own math and science test grades compared to the average grade for the class.	Sadlier-Oxford Progress in Mathematics	Double line graph, key	Chapter 9 test
Ch.9/Les. 11	7.6.1 Bar graphs, line graphs, circle graphs, stem-and-leaf plots 6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	Can you interpret and make double bar graphs?	Sadlier-Oxford Progress in Mathematics	Double bar graphs, key, scatter plot, positive correlation, negative correlation, no correlation	Chapter 9 test
Chapter 9/ Les. 14	7.6.1 Bar graphs, line graphs, circle graphs, stem-and-leaf plots 6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	Can you interpret circle graphs?	Sadlier-Oxford Progress in Mathematics	Circle graph	Chapter 9 test
Ch.10/	6.4.1 Angles and relationships	Can you estimate and measure	Sadlier-Oxford	Angle, side, vertex,	Chapter 10

Les.1		angles? Can you draw an angle of given measures?	Progress in Mathematics	interior, exterior, degree, protractor	test
Ch.10/Les. 2	5.4.1 Measure, identify, and draw angles, lines, shapes using appropriate tools 5.4.2 Identify, describe, draw, and classify triangles 8.4.2 Constructing angles and segments	Can you identify parallel, perpendicular, and skew lines? Can you classify angles and acute, obtuse, right, straight? Can you identify midpoints of line segment, congruent segments and angles, perpendicular bisectors, and angle bisectors?	Sadlier-Oxford Progress in Mathematics	Parallel, skew, acute angle, right angle, obtuse angle, straight angle, perpendicular lines, midpoint, congruent segments, segment bisector, perpendicular bisector, congruent angles, angle bisector	Chapter 10 test
Ch.10/Les. 4	6.4.4 Interior angles	Can you identify interior angles, exterior angles, corresponding angles, alternate interior angles, and alternate exterior angles?	Sadlier-Oxford Progress in Mathematics	Transversal, interior angles, exterior angles, corresponding angles, alternate interior angles, alternate exterior angles	Chapter 10 test
Ch.10/Les. 5	8.4.2 Constructing angles and segments	Can you construct line segments congruent to a given line segment? Can you construct a perpendicular bisector of a line segment? Can you construct perpendicular to line at given point on line or from given point not on line?	Sadlier-Oxford Progress in Mathematics	Construct, straight edge, compass, arc	Chapter 10 test
Ch. 10/Les. 6	8.4.2 Constructing angles and segments	Can you construct congruent angles and angle bisectors?	Sadlier-Oxford Progress in Mathematics	Bisect, angle bisector construction	Chapter 10 test
Ch. 10/Les. 7	5.4.4 Identify, describe, draw, and classify polygons 6.GM.3: Draw polygons in the coordinate plane given coordinates for the vertices; use	How do you classify polygons as regular or not regular? How do you use diagonals to determine whether polygon is convex or concave?	Sadlier-Oxford Progress in Mathematics	Polygon, regular polygon, n-gon, diagonal, convex, concave	Chapter 10 test

	coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.				
Ch.10/Les. 15	5.4.6 Reflection and rotational symmetry	How do you identify reflection, symmetrical, rotational symmetry, and point symmetry?	Sadlier-Oxford Progress in Mathematics	Symmetry, reflective symmetry, line of symmetry, rotational symmetry, point symmetry	Chapter 10 test
Ch.10/Les. 16		How do you determine which figures can tessellate? Can you tessellate a plane using given figures?	Sadlier-Oxford Progress in Mathematics	Tessellate, plane, parallel, intersecting, perpendicular	Chapter 10 test
Ch. 10/Les. 17	7.4.4 Constructing 2D patterns for 3D objects	How do you classify solid figures? How do you identify nets for solid figures?	Sadlier-Oxford Progress in Mathematics	Pg. 362	Chapter 10 test
Ch.11/Les. 3	6.RP.3b Unit rate problems...	Can you find unit rate or unit price? Can you write and use rates?	Sadlier-Oxford Progress in Mathematics	Rate, unit rate, unit price	Chapter 11 test
Ch.11/Les. 7	6.AF.9: 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. 6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one	Can you write proportions involving corresponding sides of similar figures? Can you use proportions to find missing side lengths of similar geometric figures?	Sadlier-Oxford Progress in Mathematics	Corresponding sides of similar figures	Chapter 11 test

	quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.				
Ch.11/Les. 8	<p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>	Can you use proportions to solve indirect measurement problems?	Sadlier-Oxford Progress in Mathematics	Indirect measurement	Chapter 11 test
Ch.11/Les. 9	8.5.3 Scale factors, area, volume using ratio and proportions	Can you use proportions to solve problems involving scale drawings and maps?	Sadlier-Oxford Progress in Mathematics	Scale drawings, scale, scale length, actual length,	Chapter 11 test

	<p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>			enlarged model	
Ch.11/Les. 10, 11	<p>8.2.4 Mental math for fractions, decimals, powers, and percents</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a</p>	<p>Can you write percents as ratio, percents as fractions, and vice versa? Can you use a number line to relate percents to fractions? Can you write percents as decimals and vice versa?</p>	Sadlier-Oxford Progress in Mathematics	Percent	Chapter 11 test

	<p>proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>				
Ch.11/Les. 12	<p>8.2.4 Mental math for fractions, decimals, powers, and percents</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the</p>	<p>Can you write decimal percents as decimals? Can you write fractions not factors of 100 as percents? Can you use a number line to relate and order decimals, fractions, and percents?</p>	<p>Sadlier-Oxford Progress in Mathematics</p>	<p>Decimal percents</p>	<p>Chapter 11 test</p>

	equation.				
Ch.11/Les. 13, 14	<p>8.2.4 Mental math for fractions, decimals, powers, and percents</p> <p>6.AF.9: 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.</p> <p>6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.</p>	<p>Can you write percents greater than 100% as decimal and mixed number? Can you write decimal and fractions less than .01 and 1/100 as percent and less than 1% in both decimal and fraction form? Can you write decimal and fraction percents less than 1% as decimal and fractions less than .01 and 1/100?</p>	Sadlier-Oxford Progress in Mathematics	None	Chapter 11 test
Ch.12/Les. 1	8.2.4 Mental math for fractions, decimals, powers, and percents	How do you find percent of a number by mental computation?	Sadlier-Oxford Progress in Mathematics	Percent	Chapter 12 test
Ch.12/Les. 2	8.2.4 Mental math for fractions, decimals, powers, and percents	Can you mentally compute percent of a number? Can you estimate what percent one number is of another?	Sadlier-Oxford Progress in Mathematics	None	Chapter 12 test
Ch.12/Les. 3		How do you find percent of a number?	Sadlier-Oxford Progress in Mathematics	Benchmark percent, rate, base, percent, $R \times B = \%$	Chapter 12 test

Ch. 12/Les.4		Can you find what percent or rate one number is of another?	Sadlier-Oxford Progress in Mathematics	Rate	Chapter 12 test
Ch.12/Les. 5		Can you find original number when percent of its known?	Sadlier-Oxford Progress in Mathematics	Base	Chapter 12 test
Ch.12/Les. 8		Can you find sales tax and total cost?	Sadlier-Oxford Progress in Mathematics	Sales tax, rate of sales tax, total cost	Chapter 12 test
Ch. 12/Les. 9		Can you determine the better buy?	Sadlier-Oxford Progress in Mathematics	Better buy, unit price, unit cost, unit rates, compatible number	Chapter 12 test
Ch.12/Les. 12	7.6.1 Bar graphs, line graphs, circle graphs, stem-and-leaf plots 6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	Can you make circle graphs?	Sadlier-Oxford Progress in Mathematics	None	Chapter 12 test
Ch.13/Les. 2	5.5.5 Smaller and larger units for measuring weight and their relationship to pounds and kilograms 6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.	Can you rename and compare metric units of capacity and mass?	Sadlier-Oxford Progress in Mathematics	Capacity, L, mL, kL, mass, g, mg, kg, metric Ton	Chapter 13 test
Ch.13/Les. 5	5.5.5 Smaller and larger units for measuring weight and their relationship to pounds and	Can you compute with customary units of length, capacity, and weight?	Sadlier-Oxford Progress in Mathematics	None	Chapter 13 test

	<p>kilograms</p> <p>6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.</p>				
Ch. 13/Les. 7	<p>5.5.5 Smaller and larger units for measuring weight and their relationship to pounds and kilograms</p> <p>6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.</p>	Can you use approximate equivalents between customary and metric measurement systems?	Sadlier-Oxford Progress in Mathematics	None	Chapter 13 test
Ch. 13/Les. 15	<p>8.5.4 Using formulas for perimeter and area, surface area and volume</p> <p>6.GM.6: Construct right rectangular prisms from nets and use the nets to compute the surface area of prisms; apply this technique to solve real-world and other mathematical problems.</p>	Can you find surface area of square pyramids and triangular prisms?	Sadlier-Oxford Progress in Mathematics	Models of square pyramids, models of triangular prisms, nets	Chapter 13 test
Ch. 13/Les. 18	<p>8.5.4 Using formulas for perimeter and area, surface area and volume</p> <p>6.GM.5: Find the volume of a</p>	Can you use formulas to find the volume of a pyramid?	Sadlier-Oxford Progress in Mathematics	Volume of a pyramid	Chapter 13 test

	right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.				
Ch. 14/Les. 1	<p>7.3.2 Two-step linear equations and inequalities</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.</p>	Can you write and solve two step algebraic equations?	Sadlier-Oxford Progress in Mathematics	Two step equations	Chapter 14 test
Ch. 14/Les. 2	<p>6.3.1 One-step linear equations and inequalities</p> <p>6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers.</p>	Can you write and solve addition and subtraction equations involving integers?	Sadlier-Oxford Progress in Mathematics	None	Chapter 14 test

	Represent real world problems using equations of these forms and solve such problems.				
Ch. 14/Les. 3	6.3.1 One-step linear equations and inequalities 7.3.2 Two-step linear equations and inequalities 6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p , q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.	Can you write and solve one and two step equations involving multiplication and division of integers?	Sadlier-Oxford Progress in Mathematics	None	Chapter 14 test
Ch. 14/Les. 9		Can you learn about sequence and terms in number patterns, including triangular and square numbers? Can you make conjectures about patterns in number sequence in order to find the next term(s)?	Sadlier-Oxford Progress in Mathematics	Sequence, term, conjecture, triangular numbers, square numbers	Chapter 14 test

Problem solving throughout year
Ch.12/Les. 6, 13, 14

Problem Solving standards done on almost every lesson, with modeled strategies, problems of the day, Daily Oral Math, discussion of the textbook, and the homework from the workbook.

- **PS.1: Make sense of problems and persevere in solving them.**
- **PS.2: Reason abstractly and quantitatively.**
- **PS.3: Construct viable arguments and critique the reasoning of others.**
- **PS.4: Model with mathematics.**
- **PS.5: Use appropriate tools strategically.**
- **PS.6: Attend to precision.**
- **PS.7: Look for and make use of structure.**
- **PS.8: Look for and express regularity in repeated reasoning.**

Old Standards Site:

<https://learningconnection.doe.in.gov/Standards/About.aspx?art=11>

<https://learningconnection.doe.in.gov/Standards/Standards.aspx>

New Standards Site:

<http://www.doe.in.gov/standards/mathematics>