Math | 8th

AS_D_Name	BSH_C_Name	S_Description	Standard_Pacing	Common_Assessments	Resources_Used	Vocabulary	Instructional_Practices	Notes
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Analyze and solve pairs of simultaneous linear equations.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	simultaneous linear equations		Students graph a system of two linear equations, recognizing that the ordered pair for the point of intersection is the x-value that will generate the given y-value for both equations. Students recognize that graphed lines with one point of intersection (different slopes) will have one solution, parallel lines (same slope, different y-intercepts) have no solution, and lines that are the same (same slope, same y-intercept) will have infinitely many solutions. Given two equations in slope-intercept form or one equation in standard form and one equation in slope-intercept form, students use substitution to solve the system. Essential Questions: * How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations? *Can I explain how a line represents the infinite number of solutions to a linear equation with two variables? *Can I explain how

								the point(s) of intersection of two graphs will represent the solution to the system because that/those points are solutions to both equations? *Can I use algebraic reasoning (simple substitution) and the properties of real numbers to solve a system of linear equations? *Can I use the graphs of two linear equations to estimate the solution of a system? *Can I use mathematical reasoning to solve simple systems of linear equations? *Can I solve real-world problems and mathematical problems dealing with systems of linear equations and interpret the solution in the context of the problem?
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	linear equation, variable, solution		Essential Questions: *How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? *Can I use the properties of real numbers to determine the solution of the linear equation? *Can I simplify a linear equation by using the distributive property and/or combining like terms? *Can I give examples

								of linear equations with one solution, infinitely many solutions, or no solution?
Expressions & Equations	Understand the connections between proportional relationships, lines, and linear equations.	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, and DOK Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	proportion, unit rate, slope, proportional relationship, linear equation		Students identify the unit rate (or slope) in graphs, tables and equations to compare two proportional relationships represented in different ways. Given an equation of a proportional relationship, students draw a graph of the relationship. Students recognize that the unit rate is the coefficient of x and that this value is also the slope of the line. Essential Questions: *How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? *Can I graph a proportional relationship in te coordinate plane? *Can I interpret the unit rate of a proportional relationship as the slope of the graph? *Can I justify that the graph of a proportional relationship will always intersect at the origin (0, 0) of the graph? *Can I use a graph, a table, or an equation to determine the unit rate of a proportional relationship and use the unit rate to make comparisons between various

								proportional relationships?
Expressions & Equations	Expressions and EquationsWork with radicals and integer exponents.	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Third Quarter	DOK Level 1 :Recall Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Properties of integer exponents, integer, exponent, expression, equivalent		Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$. Bases must be the same before exponents can be added, subtracted, or multiplied. Exponents are subtracted when like bases are being divided. Any number raised to the zero power is equal to one. Negative exponents occur when there are more factors in the denominator, these exponents cam be expressed as a positive if left in the denominator. Exponents are added when like bases are being multiplied. Exponents are multiplied when an exponent is raised to an exponent. Several properties may be used to simplify an expression. Essential Questions: How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations. *Can I determine the properties of integer exponents by exploring

								patterns and applying my understanding of whole number exponents? *Can I use the properties of integer exponents to simplify exponents?
Expressions & Equations	Expressions and EquationsWork with radicals and integer exponents.	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Scientific notation, Operations		Students understand scientific notation as generated in various calculators or other technology. Students enter scientific notation using E or EE (scientific notation), * (multiplication), and ^ (exponent) symbols. Students add and subtract with Scientific Notation. Students use laws of exponents to multiply and divide numbers written in Scientific Notation, writing the product or quotient in proper Scientific Notation. Students understand the magnitude of the number being expressed in Scientific Notation and choose an appropriate corresponding unit. Essential Questions: *How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations? *Can I add and

								subtract two numbers written in Scientific Notation? *Can I multiply and divide two numbers written in Scientific Notation? can I identify the various ways Scientific Notation is displayed on calculators and trough computer software?
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Solve linear equations in one variable.						Notes: a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers). b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. 8. Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of

								intersection of their graphs, because points of intersection satisfy both equations simultaneously. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6. c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Solve linear equations in one variable.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	linear equation, variable		Students recognize that the solution to the equation is the value(s)of the variable, which make a true equality when substituted back into the equation (equations shall include rational numbers, distributive property and combining like terms). Students understand that is each side of the equation were treated as a linear equation and graphed, the

								lines would be parallel. Students write equations from verbal descriptions and solve. Essential Questions: *How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? *Can I use the properties of real numbers to determine the solution of the linear equation? *Can I simplify a linear equation by using the distributive property and/or combining like terms? *Can I give examples of linear equations with one solution, infinitely many solutions, or no solution?
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Third quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	linear equations, rational numbers, solution, coefficient, Distributive Property, like terms		Essential Questions: *How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? *Can I use the properties of real numbers to determine the solution of the linear equation? *Can I simplify a linear equation by using the distributive property and/or combining like terms? *Can I give examples of linear equations with one solution, infinitely many solutions, or no solution?

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								solution to the system because that/those points are solutions to both equations? *Can I use algebraic reasoning (simple substitution) and the properties of real numbers to solve a system of linear equations? *Can I use the graphs of two linear equations to estimate the solution of a system? *Can I use mathematical reasoning to solve simple systems of linear equations? *Can I solve real-world problems and mathematical problems dealing with systems of linear equations and interpret the solution in the context of the problem?
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	linear equation, variable, estimation		Students graph a system of two linear equations, recognizing that the ordered pair for the point of intersection is the x-value that will generate the given y-value for both equations. Students recognize that graphed lines with one point of intersection (different slopes) will have one solution, parallel lines (same slope, different y-intercepts) have no solution, and lines that are the same (same

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								real-world problems and mathematical problems dealing with systems of linear equations and interpret the solution in the context of the problem?
Expressions & Equations	Analyze and solve linear equations and pairs of simultaneous linear equations.	Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	solution, variable, intersection		Students graph a system of two linear equations, recognizing that the ordered pair for the point of intersection is the x-value that will generate the given y-value for both equations. Students recognize that graphed lines with one point of intersection (different slopes) will have one solution, parallel lines (same slope, different y-intercepts) have no solution, and lines that are the same (same slope, same y-intercept) will have infinitely many solutions. Given two equations in slope-intercept form or one equation in standard form and one equation in slope-intercept form, students use substitution to solve the system. Essential Questions: * How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations? *Can I explain how a line

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Expressions & Equations	Expressions and EquationsWork with radicals and integer exponents.	Use numbers expressed in the form of a single digit times a whole-number power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 times 10^8 and the	Second Quarter	DOK level 1: recall and Level 2: Basic application-skill/concept Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Integer, Power of ten, Scientific Notation, Estimate		Students use scientific notation to express very large or very small numbers. Students compare and interpret scientific notation quantities in the context of the situation, recognizing that if the exponent increases by one, the value increases 10

		population of the world as 7 times 10^9, and determine that the world population is more than 20 times larger.						times. Likewise, if the exponent decreases by one, the value decreases 10 times. Students solve problems using addition, subtraction, or multiplication, expressing the answer in scientific notation. Essential Questions: *How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations? *Can I write an estimate of a large quantity by expressing it as the product of a single digit number and a positive power of ten? *Can I write an estimate of a very small quantity by expressing it as the product of a single digit number and a negative power of ten? *Can I compare quantities written as the product of a single digit number and a power of ten by stating their multiplicative relationships?
Expressions & Equations	Understand the connections between proportional relationships, lines, and linear equations.	Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	similar triangles, slope, non-vertical line, coordinate plane, origin, y-intercept		Using a graph, students construct triangles between two points on a line and compare the sides to understand that slope (ratio of rise to run) is the same between any two points on a line. Given an equation in slope-intercept

		vertical axis at b.						form, students graph the line represented. Students write equations in the form y=mx for lines going through the origin, recognizing that m represents the slope of the line. Students write equations in the form y=mx+b for lines not passing through the origin, recognizing that m represents the slope of the line and b represents the y-intercept.
Expressions & Equations	Expressions and EquationsWork with radicals and integer exponents.	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that &#8730 2 is irrational.	Third Quarter	DOK Level 1 :Recall Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Square root, cube root, rational numbers, perfect square, irrational numbers, Cube number, solution		Student recognize perfect squares and cubes, understanding that non-perfect squares and non-perfect cubes are irrational. Students recognize that squaring a number and taking the square root of a number are inverse operations; likewise, cubing a number and taking the cube root of a number are inverse operations. Essential Questions: *How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? *Can I recognize taking a square root as the inverse of squaring a number? *Can I recognize taking a cube

								root as the inverse of cubing a number? *Can I evaluate the square root of a perfect square? *Can I evaluate the cube root of a perfect cube? Can I justify that the square root of a non-perfect square will be irrational?
Functions	Define, evaluate, and compare functions.	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)		compare, evaluate		Student will be able to use multiple modes of representations of function to compare two functions' properties. Essential Question: Given two functions can you compare their representations?
Functions	Use functions to model relationships between quantities.	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking. Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	function, linear relationship, quantities, rate f change, initial value		Students will be able to write a linear equation, determine the rate of change, and calculate the initial value of the function. Students should also be able to interpret the rate of change and initial value, in the context of the situation is models. Essential Questions: *Given a linear relationship, can you construct a function that models it?

Functions	Use functions to model relationships between quantities.	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	functional relationship, quantities, sketch of a graph, qualitative features		Te student will be able to look at a graph and describe its features. The students will be able to take a description of a function and represent it with a graph. Essential Questions: Given a graph, can you describe the qualitative features of it (where the graph is increasing, decreasing, or staying constant)? *Given a verbal description of a function, can you sketch a graph of it? *Given a graph or a table of values, can you determine the rate of change and/or the initial value? *Given the rate of change and initial value of a function can you determine what these mean in the given context?
Functions	Define, evaluate, and compare functions.	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	equation, linear function, graph of a line, function, not linear		Students will now that an equation in the form $y = mx + b$ is a linear function and creates a line when graphed. Students will be able to give examples of nonlinear equations. Essential Questions: *Given an equation, can you determine whether it is linear or nonlinear? *Can you give an example of a nonlinear function?

Functions	Define, evaluate, and compare functions.	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	Third Quarter	DOK Level 1: Recall, and Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Function, rule, input, output, graph of a function, set of ordered pairs		Students will understand that a function is a graph of ordered pairs where each input has exactly one output. Essential Questions: *Given a set of ordered pairs, can you determine if they represent a function? *Can I explain how a line represents the infinite number of solutions to a linear equation with two variables? *Can I explain how the point(s) of intersection of two linear graphs will represent the solution to the system of two linear equations because that/those point(s) are solution to both equations? *Can I use algebraic reasoning (simple substitution) and the properties of real numbers to solve a system of linear equations? *Can I use the graphs of two linear equations to estimate the solution of a system? *Can I use mathematical reasoning to solve simple systems of linear equations? *Can I solve real-world problems and mathematical problems dealing with systems of linear equations

								and interpret the solution in the context of the problem?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Lines are taken to lines, and line segments to line segments of the same length.	Third Quarter	DOK Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	line, line segment, length		Essential Question: *Can you verify that after a figure has been translated, corresponding line segments remain the same?
Geometry	Understand and apply the Pythagorean Theorem.	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.						Notes: 6. Explain a proof of the Pythagorean Theorem and its converse. 7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
Geometry	Understand and apply the Pythagorean Theorem.	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	Pythagorean Theorem, two-dimensional, three-dimensional, right triangle, leg, hypotenuse		The student will determine the unknown side lengths in a right triangle in real world and mathematical problems. Essential Question: *Can I find the unknown side lengths of a right triangle.
Geometry	Understand and apply the Pythagorean Theorem.	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	coordinate system, Pythagorean Theorem, right triangle, leg, hypotenuse		The student understands that the line segment between two points is the length of the hypotenuse of the corresponding right triangle. Essential Question: *Can I use the Pythagorean Theorem to find the distance between two points in the coordinate plane?
Geometry	Understand congruence and similarity	Angles are taken to angles of the same measure.	Third Quarter	DOK Level 2: Basic Application-skill/concept, Selected	Textbook and text resources, Study Island,	angle, measure of an angle		Essential Question: Can you verify that

	using physical models, transparencies, or geometry software.			Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Smart Board, Accelerated Math			after a figure has been reflected, corresponding angle have the same measure?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Parallel lines are taken to parallel lines.	Third Quarter	DOK Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	parallel lines		Essential Question: *Can you verify that after a figure has been rotated, parallel lines remain parallel?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	dilation, translation, rotation, reflection, two-dimensional, coordinates		Students identify resulting coordinates from dilations, translations, reflection, and rotations recognizing the relationship between the coordinates and the transformations. Essential Question: *Can I describe the changes occurring to the x- and y-coordinates of a figure after a translation, reflection, rotation, or dilation?
Geometry	Understand and apply the Pythagorean Theorem.	Explain a proof of the Pythagorean Theorem and its converse.	Third Quarter	DOK Level 2: Basic Application-skill/concept, Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	proof, Pythagorean Theorem, converse, right triangle, leg, hypotenuse, square		The student explains the Pythagorean Theorem, understanding that the sum of the square of the lengths of the legs is equal to the square of the length of the hypotenuse in a right triangle. Essential Question: Can I explain the Pythagorean Theorem?
Geometry	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	volume, formula, cone, cylinder, sphere		The student understands that the volume of a cylinder is three times the volume of a cone having the same base area and height. Students build on understanding

								of circles and volumes from 7th grade. Essential Question: *Do you know the formulas for volume of a cone, cylinder, and sphere? Can you apply the formulas for volume of a cone, cylinder, and sphere?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	Third Quarter	DOK Level 1I Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	two-dimensional, congruent, rotation, reflection, translation, sequence		The student will be introduced to congruency. Students will examine two figures to determine congruency. Students will recognize the symbols of congruency. Essential Questions: *Can you explain how transformations can be used to prove that two figures are congruent? *Can you perform a series of transformations to prove or disprove figures are congruent?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	Third Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	similar, two-dimensional, sequence, translation, rotation, reflection, proportional		Essential Question: * Do you know that similar figures have congruent angles and sides that are proportional
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles	Third Quarter	DOK Level 1: recall, Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking, Selected Response, Extended Constructed Response, Technology	Textbook and text resources, Study Island, Smart Board, Accelerated Math	informal arguments, facts, sum, exterior angle, transversal, angle, triangle		The students use exploration and deductive reasoning to determine relationships. Essential Question: *Can

		created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.		Enhanced, Performance Task (eligible as a summative item)				you show the relationship of angles by rearranging them?
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Verify experimentally the properties of rotations, reflections, and translations:						Notes: Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and line segments to line segments of the same length. b. Angles are taken to angles of the same measure. c. Parallel lines are tak???????? ????? ??
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software.	Verify experimentally the properties of rotations, reflections, and translations:	Third Quarter	DOK Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	congruent, similar, properties, rotation, reflection, translations		Students use compasses, protractors, ruler to explore figures created from translations, reflections, and rotations. Essential Question: *Can I use a compasses, protractors, ruler to explore figures created from translations, reflections, and rotations.
Statistics & Probability	Investigate patterns of association in bivariate data.	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe	Fourth Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	scatter plots, bivariate data, clustering, quantity, outliers, positive/negative association, linear association, nonlinear association		Essential Questions: *Can you represent numerical data on a scatter plot and use it to examine relationships between variables?

		patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.						
Statistics & Probability	Investigate patterns of association in bivariate data.	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	Fourth Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	quantitative variables, scatter plots, linear/nonlinear association		Essential Question: *Can I show that a straight line can represent a scatter plot with linear association, and that points on a scatter plot can model a straight line?
Statistics & Probability	Investigate patterns of association in bivariate data.	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have	Fourth Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, and Level 3: Strategic Thinking Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	bivariate data, patterns of association, frequencies, relative frequencies		Students understand that a two-way table provides a way to organize data between two categorical variables. Essential Question: *Can I construct and use a two-way table to summarize data?

		a curfew also tend to have chores?						
Statistics & Probability	Investigate patterns of association in bivariate data.	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.	Fourth Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	linear model, bivariate data, slope, intercept		Essential Question: *Can you determine and interpret the slope and y-intercept of a line in the context of the problem?
The Number System	Know that there are numbers that are not rational, and approximate them by rational numbers.	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.						Notes: Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.
The Number System	Know that there are numbers that are not rational, and approximate them by rational numbers.	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.	First Quarter	DOK Level 1: Recall, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	irrational number, rational number, decimal, repeating decimal		Students will know the difference between rational and irrational numbers. Students will find the quotient of two integers, identify whether the quotient is repeating or terminating, then use that knowledge to determine whether the number is rational or

								irrational. Students will convert a repeating decimal number into an equivalent fraction or mixed number. Essential Questions: Given a number, can you determine whether it is rational or irrational? *Can you convert a repeating decimal to the equivalent fraction or mixed number?
The Number System	Know that there are numbers that are not rational, and approximate them by rational numbers.	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., &#928 ²). For example, by truncating the decimal expansion of &#8730 2, show that &#8730 2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	First Quarter	DOK Level 1: Recall, Level 2: Basic Application-skill/concept, Selected Response, Extended Constructed Response, Technology Enhanced, Performance Task (eligible as a summative item)	Textbook and text resources, Study Island, Smart Board, Accelerated Math	rational approximation, irrational number, number line diagram		Students will compare, order, and graph (on a number line) irrational numbers. Students will find and approximate the value of expressions. Essential Questions: *Given an irrational number, can you estimate its value and plot its location on a number line? *Given a repeating decimal, Can you estimate its value and plot its location on a number line?