S Unit 1

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
Why is it important to use the order of operations in the problem solving process?	1 a. Add and Subtract Integers		Integer, Sum, Difference, positive integer, negative integer	Quiz: Sections 1a-1d			
How does solving equations apply to the real world?	1b. Multiply and Divide Integers						
	1c. Simplify expressions with Exponents		integer, product, quotient	Quiz:1e-1g			8.EE.A.1-Expressions and Equations Work with radicals and integer exponents ~ Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32Â Ã—Â 3â€"5 = 3â€"3 = 1/33 = 1/27.
	1.d Order of Operations		exponent, base, order of operations	Test: 1a-1h			
	1e. Simplify Variable Expressions		simplify, expression, evaluate, like terms, variable , constant, coefficient, distribute				8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.

S e p t e m b e r

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	1 f. Distributive Property with Combining Like terms		distribute				8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
	1 g. Solving One-Step Equations using Addition or Subtraction						8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
	1.h. Solving One-Step Equations using Multiplication or Division						8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
	1i. Write and Solve One-Step Equations given real world situations						8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.

Unit 2

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How does solving equations apply to the real world? Why is it important to use the order of operations in the problem solving process?	2a: Solving Two-Step Equations		expression, equation, opposite operation, identity, equivalent equation	Quiz: 2a-2c			8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
	2b: Solving Multi-Step Equations by Combining Like Terms			Test: Sections 2a-2e			8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.

Content	Standards
2c: Solving Multi-Step Equations with Variables on both sides	8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
2d: Solving all types of Multi-Step Equations	8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
2e: Write and Solve Multi-Step Equations given real world situations	8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable. 8.EE.C.7b-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.

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Unit 3

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How do arithmetic operations relate to solving equations and inequalities?	3a: Introduction to Inequalities		inequality, greater than, less than, less than or equal to, greater than or equal to, inverse operation	Quiz: Sections 3a-3c			8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable. 8.EE.C.7b-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.

b How does solving inequalities apply to real-world? How is solving inequalities the same and different from solving equations? How can I use Venn Diagrams to Organize Information?

e Where can I find compound inequalities in the real-world?

r	3b: Solving One-Step Inequalities using Addition or Subtraction	Test: Sections 3a- 3e	8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
			8.EE.C.7b-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.
	3c: Solving One-Step Inequalities using Multiplication or Division		8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
			8.EE.C.7b-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.
	3d: Solving Two-Step Inequalities		8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.
			8.EE.C.7b-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.
	3e: Solving Multi-Step Inequalities		8.EE.C.7-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve linear equations in one variable.

8.EE.C.7b-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.

Unit 4

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How do linear functions and their graphs help us interpret events that occur in the world around us?	4a: Introduction to graphing and slope		slope, y-intercept, slope-intercept form, origin	Quiz: Sections 4a-4c			8.EE.B.5-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.
							8.SP.A.3-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.
What does a linear function look like?							
	4b: Graph lines given an equation in slope-intercept form			Test: Sections 4a - 4f			8.EE.B.5-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. 8.F.A.3-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. 8.SP.A.3-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.
	4c: Write an equation in slope-intercept form given a graph						8.EE.B.5-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.

		8.EE.B.6-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 vertical axis at b.
		8.F.A.3-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.
4d: Introduction to Relations and Functions	relation, function, mapping, rate of change	8.F.A.1-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.1
		8.F.A.2-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).
		8.F.A.3-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.
4e: Graphing or Creating a table of values to represent functions		8.F.A.1-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.1
		8.F.A.2-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).
		8.F.B.5-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.
4f: Write and graph functions given a real world situation		8.F.A.1-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.1
		8.F.A.2-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).

8.F.B.4-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.

8.F.B.5-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.

Mini- Unit 5

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How are systems of equations, inequalities and the graphs of equations or inequalities used to solve real-world problems?	5a: Introduction to systems of equations		System of equation, slope-intercept form, solution	Mini Quiz: Sections 5a-5b			8.EE.C.8-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Analyze and solve pairs of simultaneous linear equations.

8.EE.C.8a-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. |
| | 5b: Given a graph identify if the solution is one, zero, or all | | | Test: Sections 5a-5d | | | 8.EE.C.8-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Analyze and solve pairs of simultaneous linear equations.

8.EE.C.8a-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. |
| | | | | | | | 8.EE.C.8b-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. |

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	5c: Given equations and multiple choice solutions, identify the correct solution for the given system.						8.EE.C.8a-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.
							8.EE.C.8b-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.
							8.EE.C.8c-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Solve real-world and mathematical problems leading to two linear equations in two variables.
	5d: Graph systems of equations and identify the solution						8.EE.C.8-Analyze and solve linear equations and pairs of simultaneous linear equations ~ Analyze and solve pairs of simultaneous linear equations.
							8.EE.C.8a-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.

Mini-Unit 6

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How are linear functions helpful in solving real-world problems?	6a: Introduction to Scatter Plots		scatter plot, correlation, positive correlation, negative correlation, negative correlation,	Mini Quiz: Sections 6a-6b			8.SP.A.1-Investigate patterns of association in bivariate data ~ onstruct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
							8.SP.A.2-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.
	6b: Create Scatter Plots given data			Test: Sections 6a-6d			8.SP.A.2-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.

	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		6c: Create a line of best fit		tend line (line of best fit)				8.SP.A.4-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.
		6d: Write an equation for the line of best fit, then use the line of best fit to make predictions						8.SP.A.3-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.
								8.SP.A.2-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.
								8.SP.A.3-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.

D Unit 7

	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
c	Why are exponents and exponential functions important to simplifying and solving many real-world problems involving math and science?	7a: Exponential Rules: Products		exponent, base, power, exponential rules	Quiz: Section 7a-7c			8.EE.A.1-Expressions and Equations Work with radicals and integer exponents ~ Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32Â Ã—Â 3â€"5 = 3â€"3 = 1/33 = 1/27.
e		7b: Zero and Negative Exponents		exponent, base, power, exponential rules	Test: Sections 7a-7e			8.EE.A.1-Expressions and Equations Work with radicals and integer exponents ~ Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32Â Ã—Â 3â€"5 = 3â€"3 = 1/33 = 1/27.

	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
m	7c: Exponential Rules: Quotients		exponent, base, power, exponential rules				8.EE.A.1-Expressions and Equations Work with radicals and integer exponents ~ Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 Ã—Â 3â€"5 = 3â€"3 = 1/33 = 1/27.
b	7d: Exponential Rules: Powers raised to powers		exponent, base, power, exponential rules				8.EE.A.1-Expressions and Equations Work with radicals and integer exponents ~ Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 Ã—Â 3â€"5 = 3â€"3 = 1/33 = 1/27.
e	7e: Scientific Notation		exponent, base, scientific notation				8.EE.A.3-Expressions and Equations Work 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.
r							8.EE.A.4-Expressions and Equations Work 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.

J Unit 8

	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
a								
n	How are two-dimensional figures used to solve problems involving three-dimensional figures?	8a: Volume of Cylinders, Cones, and Spheres		volume, cylinder, cone, sphere,	Quiz: Section 8a-8c			8.G.C.9-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.
u		8b: Translation of Figures		translation	Test: Sections 8a-8e			8.G.A.1-Understand congruence and similarity using physical models, transparencies, or geometry software ~ Verify experimentally the properties of rotations, reflections, and translations:
a								8.G.A.2-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.

r			8.G.A.3-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.
y			8.G.A.4-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.
8c: Reflections and Symmetry of Figures	Reflection		8.G.A.1-Understand congruence and similarity using physical models, transparencies, or geometry software ~ Verify experimentally the properties of rotations, reflections, and translations:
			8.G.A.2-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.
			8.G.A.3-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.
			8.G.A.4-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.
8d: Rotations and Symmetry of Figures	Rotation		8.G.A.1-Understand congruence and similarity using physical models, transparencies, or geometry software ~ Verify experimentally the properties of rotations, reflections, and translations:
			8.G.A.2-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.

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	8e: Dilations of Figures		Dilation				8.G.A.3-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. 8.G.A.4-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. 8.G.A.1-Understand congruence and similarity using physical models, transparencies, or geometry software ~ Verify experimentally the properties of rotations, reflections, and translations: 8.G.A.2-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. 8.G.A.3-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. 8.G.A.4-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.

Fe Unit 9

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
b What is the real number system?	9a: Real Numbers		real number, rational number, irrational number	Quiz: Sections 9a-9c			8.NS.A.1-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.

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a | 9b: Rational Numbers | real number, rational number, irrational number | Test: Sections 9a-9f | 8.EE.A.2-Expressions and Equations Work with radicals and integer exponents ~ Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that ?2 is irrational.

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8.NS.A.1-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.

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8.NS.A.2-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., ?2).

r				8.NS.A.2-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., ?2).
	9c: Square Roots	square root, cube root,		8.EE.A.2-Expressions and Equations Work with radicals and integer exponents ~ Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that ?2 is irrational.
	9d: Cubed Roots	square root, cube root,		8.EE.A.2-Expressions and Equations Work with radicals and integer exponents ~ Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that ?2 is irrational.
	9e: Simplifying Square and Cubed Roots	square root, cube root,		8.NS.A.2-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., ?2).

8.NS.A.2-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., ?2).

9f: Pythagorean Theorem	pyrhagoren theorem	8.EE.A.2-Expressions and Equations Work with radicals and integer exponents ~ Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that ?2 is irrational.
		8.G.B.6-Understand and apply the Pythagorean Theorem ~ Explain a proof of the Pythagorean Theorem and its converse.
		8.G.B.7-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.
		8.G.B.8-Understand and apply the Pythagorean Theorem ~ Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

March — PSSA Review

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	Review all content from the year						

May — Unit 10

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
Why is it helpful to represent the same mathematical idea in different ways?	10a: Intro to absolute Value		absolute value	Quiz: Sections 10a-10b			A-REI.A.1-Understand solving equations as a process of reasoning and explain the reasoning ~ Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
	10b: Absolute value expressions		expression,	Test: Section 10a-10d			A-REI.B.3-Solve equations and inequalities in one variable ~ Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
	10c: Absolute Value equation (one step)		equation				A-REI.B.3-Solve equations and inequalities in one variable ~ Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
	10d: Absolute Value equations (two step)						A-REI.B.3-Solve equations and inequalities in one variable ~ Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

Unit 11

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How are polynomials and factoring useful in modeling real world data?	11a: Introduction to Polynomials		Polynomial, exponent, like term, coefficient, terms				A-APR.A.1-Perform arithmetic operations on polynomials ~ Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
				Quiz: Sections 11a-11b			
	11b: Adding and Subtracting Polynomials						A-APR.A.1-Perform arithmetic operations on polynomials ~ Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract,
				Test: Sections 11a-11d			and multiply polynomials.

11c: Multiplying a monomial by a polynomial Multiplying Binomials 11d: Multiplying Polynomials	monomial, binomial	A-APR.A.1-Perform arithmetic operations on polynomials ~ Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.