

Common Core Standards	Major Topic	Key Skills	Chapters	Key Vocabulary	Essential Questions
Module 1					
<p>Pre-Requisites Skills: Students need to know how to add, subtract, multiply and divide. Students need to know what a variable and symbols are. Students need to know how to model certain words with mathematical symbols Students need to know what the opposite operations are of addition, subtraction, multiplication and division. Students need to know order of operations Students need to know inequality symbols and what they mean Students need to know how to graph a simple inequality on a number line (ie $x > 4$) Students need to know the meanings of exponents ($2^4 = 2 \times 2 \times 2 \times 2$)</p>					
Linear Equations					
<p>A-SSE-1. Interpret expressions that represent a quantity in terms of its context</p> <p>A-SSE.1a-Interpret parts of an expression, such as terms, factors and coefficients</p>	<p>Parts of an Expression</p>	<p>Identify parts of an expression using vocabulary such as term, equation, inequality</p> <p>Explain how the different parts of the expression effect the expression</p>	<p>1.3-Write Expressions 1.4-Write Equations and Inequalities</p>	<p>Addition; sum, total, more than, increase by, plus, etc. Subtraction: Difference, less than, minus, decreased by Multiplication: Product, times, multiplied by or of Division: Quotient, divide by or divide into Term Equation Inequality Variable Coefficients Constants expression</p>	<p>How do you write an expression to represent a real world situation?</p> <p>How do you write an equation and inequality?</p>

<p>A-REI.3-Solve linear equations and inequalities in one variable, including equations with coefficients represented by letter</p>	<p>Solving Linear Equations</p>	<p>Solve linear equations with variable and rational coefficients</p>	<p>3.1-One step equations 3.2-Two step equations Alternative method pg 147 3.3-Solve multiple step equations 3.4-Solve equations with variables on both side Chapter 3 Review</p>	<p>Inverse Operation, Reciprocal, equivalent equations, like terms, input, output, distributive property, identity</p>	<p>How do you solve one step equations using addition, subtraction, multiplication and division?</p> <p>How do you solve two step equations?</p> <p>How do you solve multiple step equations?</p> <p>How do you solve equations with variables on both sides?</p>
<p>A-REI.1-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</p>	<p>Explaining solving Linear Equations</p>	<p>Solve one variable equations</p> <p>Explaining the steps to solving a linear equation</p> <p>Verify solutions of equations using operations and vocabulary</p> <p>Identify and justify the reasonableness of an answer</p> <p>Identify and justify the method used to solve an equation</p>	<p>3.1-One step equations 3.2-Two step equations Alternative method pg 147 3.3-Solve multiple step equations 3.4-Solve equations with variables on both side Chapter 3 Review **Word Problems and context**</p>	<p>Verify Justification Argument Inverse operations identities Properties of operations</p>	<p><i>Essential questions from above, students are now required to be able to verbalize procedures.</i></p>

<p>A-CED.1-Create equations and inequalities in one variable and use them to solve problems. Include arising from linear and quadratic functions, and simple rational and exponential functions</p> <p>A-CED.3-Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different food.</p>	<p>Writing equations from word problems</p>	<p>Write and solve a linear equation from a word problem</p> <p>Explain why a solution is valid or not</p> <p>Explain what the solution means in a specific context</p> <p>Explain if a solution makes sense of not</p>	<p>Chapter 3.1-3.5-Word Problems that students will be able to create and solve equations</p> <p>Additional problems can be found in Chapter 4.1-4.5, 4.7 and 5.1-5.4</p>	<p><i>parent linear functions, sequence, arithmetic sequence, common difference, family of functions</i></p>	<p>How do you use linear equations to solve real world problems?</p>
--	---	---	--	---	--

<p>A-CED.4-Reagrrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm’s law $V=IR$ to highlight resistance R</p>	<p>Literal Equations</p>	<p>Rewrite different literal equations in terms of a different variable using real world formulas</p>	<p>3.8-Rewrite Equations and Formulas</p>	<p>Literal Equations Squared</p>	<p>How do you rewrite equations in terms of an individual variable?</p>
<p>A-CED.2-Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. A-CED.3-Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different food.</p>	<p>Writing and graphing equations</p>	<p>Write linear equations in two or more variables</p> <p>Rewrite equations in terms of one variable</p> <p>Explain why a solution is valid or not</p> <p>Explain what the solution means in a specific context</p> <p>Explain if a solution makes sense of not</p> <p>Identify the correct domain for the solution within the constraints of a word problem</p>	<p>4.1-Plot Points on a coordinate plane (Remedial) 4.2-Graph Linear Equations 4.3-Graphing using intercepts 4.4-Finding the Rate of Change 4.5-Slope-Intercept Form 4.7-Graph Linear Functions 5.1-Write Linear Equations 5.2-Use Linear Equations in Slope-intercept form 5.3-Write Linear Equations in Point-Slope form 5.4-Write Linear Equations in Standard form 5.5-<i>Writing equations of parallel and perpendicular lines</i></p>	<p>Quadrants, Coordinate Plane, Ordered pair, standard form of a linear equation, linear functions, y-intercept and x-intercept, slope, rate of change, slope-intercept form, parallel lines,</p>	<p>How do you plot points in a coordinate plane?</p> <p>How do you graph linear equations?</p> <p>How do you use intercepts to graph equations?</p> <p>How do you graph linear equations given in slope intercept form?</p> <p>How do you use graphs to solve linear equations in one-variable?</p> <p>How do you write an equation of a line in slope intercept form?</p> <p>How do you find the equation of a line given two points?</p> <p>How do you write linear equations in point slope form?</p> <p>How do you use a linear model to identify graph and write a general form of an arithmetic sequence?</p>

					How do you write an equation in standard form?
Linear Inequalities					
A-REI.3-Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Linear Inequalities	Solve one variable inequalities with rational coefficients	6.1-Solve inequalities using addition and subtraction 6.2-Solve inequalities using multiplication and division 6.3-Solve inequalities using multiple steps 6.4-Solve compound inequalities <i>*6.5-Solve absolute value equations</i> <i>*6.6-Solve absolute value inequalities</i>	Inequality Greater than (or equal to) Less than (or equal to) Absolute value Compound inequalities Solution set	How do you solve and graph one-variable inequalities? How do you solve compound inequalities?

<p>A-CED.1-Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions</p> <p>A-CED.3-Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different food.</p>	<p>Writing Inequalities</p>	<p>Write and solve linear inequalities from a word problem</p> <p>Explain why a solution is valid or not</p> <p>Explain what the solution means in a specific context</p> <p>Explain if a solution makes sense of not</p> <p>Identify the correct domain for the solution within the constraints of a word problem</p> <p>Write the correct inequality symbol based on a word problem</p>	<p>Word Problems from Chapter 6.1-6.4 (6.5-6.6)</p>	<p>Greater than (or equal to) Less than (or equal to) Product Sum Difference Context Solution set Domain</p>	<p>How do you solve an inequality?</p> <p>How do you know if your solution set is correct?</p>
--	-----------------------------	---	---	--	--

Exponential Equations

<p>A.REI.3-Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters</p>	<p>Solving exponential equations</p>	<p>Solving an exponential equation with variable and rational coefficients by applying the law of exponents</p>	<p>8.1-Apply Exponent properties involving products 8.2-Apply Exponent properties involving quotients 8.3-Define and use zero and negative exponents <i>*8.4-Use Scientific notation</i></p>	<p>Power Exponent Base Reciprocal Equation Solution set</p>	<p>How do you use properties of exponents involving products, quotients and powers? How do you eliminate negative exponents? Why can there be more than one solution to an exponential equation? (positive and negative values)</p>
<p>A.SSE.1.b-Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.</p>	<p>Interpreting Expressions</p>	<p>Identify factors of an expression Describe the effects of the parts of an expression</p>	<p>8.5-Write and Graph Exponential growth functions</p>	<p>Interest Growth Decay <i>Scientific notation</i></p>	<p>How do you write and graph equations for exponential growth functions? How do you separate an expression into its components? How do linear and exponential functions differ? (constant growth vs. geometric growth)</p>

<p>A-CED.1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions</p> <p>A-CED.3-Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different food.</p>	<p>Writing Equations</p>	<p>Write and solve exponential equation from a word problem</p> <p>Explain why a solution is valid or not</p> <p>Explain what the solution means in a specific context</p> <p>Explain if a solution makes sense of not</p> <p>Identify the correct domain for the solution within the constraints of a word problem</p> <p>Write the correct inequality symbol based on a word problem</p>	<p>8.5-Word Problems</p>	<p>Product Sum Difference Power</p>	<p>How can we use exponential equations to solve real world problems?</p>
---	--------------------------	--	--------------------------	---	---

Skills to be embedded throughout

<p>N-Q.1. Use units as a way to understand problems and to guide the solution of multi-step problems; Choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays</p>	<p>Appropriate units and scales</p>	<p>Identify appropriate scales and origins for graphs and data displays using the context of the problem.</p> <p>Choose and consistently use appropriate units throughout the problems.</p> <p>Explain the units for the problems using appropriate units</p>		<p>Units (inches, feet, squared, cubed, etc.) Scale Origin x-axis y-axis Formulas (area, perimeter, etc.)</p>	
<p>N-Q.2. Define appropriate quantities for the purpose of descriptive modeling</p>	<p>Modeling</p>	<p>Define appropriate quantities in terms of the context of real world problems</p>			
<p>N-Q.3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p>	<p>Accuracy and Measurement</p>	<p>Round solutions appropriately within the context of the word problems</p>		<p>Accuracy Rounding Estimation</p>	

Common Core Standards	Major Topic	Key Skills	Chapters	Key Vocabulary	Essential Questions
Module 2					
Pre-requisite skills:					
Students should be able to construct various types of graphs (Bar graph, scatter plot)					
Students should be able to identify and label key parts of a graph (x-axis, y-axis, origin, quadrants)					
Students should be able to calculate the mean and median					
Students should be able to tally data					
Students should be able to calculate simple percentages					
Students should be able to understand the meaning of percentile vs. percentages.					
One Variable Data					
S-ID.1. Represent data with plots on the real number line (dot plots, histograms, and box plots).	Data Displays	<p>Calculate the mean, median, interquartile range, and standard deviation.</p> <p>Determine the quartiles of a data set.</p> <p>Draw a dot plot, histogram, and box-and whisker plot to represent statistical data.</p>	<p>13.6-Use Measures of Central Tendency and Dispersion</p> <p>13.6-Extension-Standard Deviation</p> <p>13.7-Interpret Stem-and-Leaf Plots and Histograms (Focus on histograms)</p> <p>**Histograms**</p> <p>13.7A-online-Dot Plots</p> <p>13.8-Interpret Box-and-Whisker plots</p> <p>**Need more real world Examples**</p>	<p>Histogram</p> <p>Dot Plot</p> <p>Box Plot</p> <p>Statistical data</p> <p>Frequency</p> <p>Mean</p> <p>Median</p> <p>Interquartile Range</p> <p>Standard Deviation</p> <p>Range</p> <p>Central Tendency</p> <p>Quartiles</p> <p>Categories/qualitative data</p>	<p>How do you create a dot plot, box-and-whisker and histogram?</p> <p>How do you calculate the mean, median, interquartile range and standard deviation?</p> <p>What is a quartile and what does it represent?</p> <p>How do you find the four quartiles?</p> <p>What does each gap in a histogram represent?</p>

<p>S-ID.2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.</p>	<p>Comparing Data Sets</p>	<p>Compare two data sets in terms of center (mean/median)</p> <p>Compare two data sets in terms of spread (interquartile range/standard deviation)</p> <p>Choose and justify the appropriate measures of center to compare two data sets.</p> <p>Choose and justify the appropriate measures of variability to compare two data sets</p>	<p>Pg. 888 example 2, Pg. 891 # 19, 20 **Word Problems, need problems that address comparison</p>	<p>Mean Median Interquartile Range Standard deviation Center Spread Quartiles Distribution Measure of Variability Percentile</p>	<p>How can we use graphs to visual and compare two similar sets of data?</p> <p>What does the interquartile range of two plots tell you?</p>
---	----------------------------	--	--	--	--

<p>S-ID.3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).</p>	<p>Interpreting data</p>	<p>Draw conclusions from two or more data sets in terms of their center and spread (mean, median, interquartile range, standard deviation)</p> <p>Describe the effects of outliers in terms of center and spread of a data set.</p> <p>Explain how an outlier can affect the measures of center of a data set</p> <p>Analyze data represented in different forms, box-and-whiskers plot, and histogram and dot plot.</p> <p>Compare and Contrast box-and-whisker plot, histogram and dot plots.</p>	<p>Word problems of 13.6-13.8 13.8A-online- Analyze data distribution</p>	<p>Outliers Skewed Bias</p>	<p>How do outliers affect the data set?</p> <p>What conclusions can you draw from a box-and –whiskers that you can't draw from a histogram or dot plot?</p> <p>Are conclusions drawn from data sets realistic in terms of the context?</p>
---	--------------------------	---	---	-------------------------------------	--

<p>S-ID.5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal and conditional relative frequencies). Recognize possible associations and trends in the data.</p>	<p>Two-Way Frequency Tables</p>	<p>Create a two-way frequency tables.</p> <p>Recognize possible trends in data in two-way frequency tables.</p> <p>Draw conclusions about two way frequency tables.</p> <p>Calculate Joint-frequency, marginal frequency, and conditional relative frequency of data represented in a two-way frequency table.</p>	<p>13.6A-online-Two way frequency tables</p> <p>**Need more resources**</p>	<p>Two-way frequency tables</p> <p>Conditional relative frequency</p> <p>Joint frequency</p> <p>Marginal frequency</p> <p>Trends</p> <p>Association</p> <p>Sub-categories</p>	<p>How do two-way frequency tables help understand data better?</p> <p>What are the benefits of the conditional relative frequency of a data set?</p> <p>What are the benefits of the joint frequency of a data set?</p> <p>What are the benefits of the Marginal frequency of a data set?</p> <p>What do trends in data tell you about the data?</p>
---	---------------------------------	--	--	---	---

Linear Representation of Data

<p>S-ID.6. Represent data on two quantitative variables on a scatter plot and describe how the variables are related.</p>	<p>Scatter Plots</p>	<p>Draw a scatter plot</p> <p>Describe how variables are related to the scatter plot</p>	<p>4.1-Plotting Points</p> <p>**Drawing scatter plots and describing how they are related**</p>	<p>Scatter plot</p> <p>Quantitative Variables</p>	<p>How do you plot points in a coordinate plane?</p> <p>How do you identify trends in a scatter plot?</p>
<p>S-ID.9. Distinguish between correlation and causation.</p>	<p>Correlation vs Causation</p>	<p>Explain the difference between causation and correlation</p> <p>Determine different types of statistical relationships, particularly cause- and-effect relationships</p>	<p>A26-A27-Supplemental Material</p> <p>**need more resources</p>	<p>Positive correlation</p> <p>Negative correlation</p> <p>Correlation</p> <p>Causation</p> <p>Cause-and-effect</p> <p>Outliers</p>	<p>What's the difference between correlation and causation?</p> <p>What determines an outlier?</p>

<p>S-ID.6.c. Fit a linear function for scatter plots that suggest a linear association</p>	<p>Line of best fit</p>	<p>Calculate the line of best fit by hand and using technology.</p> <p>Compute Linear Regression from a set of bivariate data</p> <p>Find correlation between a scatter plot and the line of best fit</p>	<p>5.6-Fit Line to data 5.6-Perform Linear Regression</p>	<p>Correlation Line of fit Scatter Plot Linear regression Bivariate</p>	<p>How do you make a scatter plot and write equations to model data?</p> <p>How do you compute the linear regression using the calculator?</p>
<p>S-ID.6.a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Uses given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models</p>	<p>Function of best fit</p>	<p>Calculate the line of best fit by hand and using technology.</p> <p>Draw conclusions about data represented in a scatter plot using the line of fit.</p> <p>Compute linear regression from a set of multi-variable data.</p>	<p>5.7-Predict with linear models **Expand**</p>	<p>Linear regression Multi-variable data Exponential regression <i>Quadratic regression</i> Model</p>	<p>What conclusion can we draw using the line of best fit?</p> <p>What tools can be used to aid you in finding the regression?</p> <p>How do you choose a function as suggested by the context (linear, exponential, etc.)?</p>
<p>S-ID.7. Interpret the slope (rate of change) and the intercept (constant term) of a linear fit in the context of the data.</p>	<p>Slope and y-intercept</p>	<p>Calculate the slope and y-intercept of a linear model and interpret the meaning within the context of the problem.</p>	<p>4.4-Finding the Rate of Change 4.5-Slope-Intercept Form **Using with data**</p>	<p>Slope Linear Model Rate of Change y-intercept undefined</p>	<p>What does the slope mean in terms of the context of the problem?</p> <p>What does the y-intercept mean in terms of the context of the problem?</p>

<p>S-ID.6.b. Informally assess the fit of a model function by plotting and analyzing residuals.</p>	<p>Analyzing fit of regression model</p>	<p>Assess the fit of a function by plotting and analyzing the residuals.</p> <p>Determine and explain if the line of fit is appropriate for the scatter plot through the residual plot.</p>	<p>5.6-Perform Linear Regression 5.7-Predict with Linear Models 5.7A-online-Assess the fit of a model **Expand**</p>	<p>Residual Residual line plot</p>	<p>How can you use the residual to determine if the line of fit is appropriate?</p>
<p>S-ID.8. Compute (using technology) and interpret the correlation coefficient of a linear fit.</p>	<p>Correlation Coefficient</p>	<p>Define the correlation coefficient of a linear model</p> <p>Compute the correlation coefficient of a linear model</p>	<p>5.6-Perform Linear Regression **Need more Resources**</p>	<p>Correlation coefficient</p>	<p>What is the correlation coefficient?</p> <p>How do you find the correlation coefficient of a linear model (Using technology)?</p>

Common Core Standards	Major Topic	Key Skills	Chapters	Key Vocabulary	Essential Questions
Module 3					
<p>Pre-Requisite Skills from Module 1: Students need to know how to add, subtract, multiply and divide. Students need to know what a variable and symbols are. Students need to know how to model certain words with mathematical symbols Students need to know what the opposite operations are of addition, subtraction, multiplication and division. Students need to know order of operations Students need to know inequality symbols and what they mean Students need to know how to graph a simple inequality on a number line (i.e. $x > 4$) Students need to know the meanings of exponents ($2^4 = 2 \times 2 \times 2 \times 2$)</p> <p>Additional Pre-Requisite Skills: Equation substitution Point-slope graphing Tables Inequalities Solution sets Tables and graphing with calculator Solving a system of equation using tables</p> <p>Skills acquired from Module 1: Students need to know how to solve equations in terms of variables (i.e. x and y)</p>					
Systems of Equations					
A-REI.10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	Systems of Equations- Graphically	Define a solution set of a linear and exponential equations as all the points that satisfy the equations	7.1-Solve Linear systems by graphing **Include different types of graphs (ie the solution of a linear and an exponential)	Systems of Equations Solution Set Curve Intersection point Coordinates Parallel lines Coordinate Grid	How do you solve systems of linear equations by graphing? Why is the intersection of two equations the solution set of the system? How many solutions can there be in a system of equations?

<p>A-REI.6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.</p> <p>A-REI.5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.</p>	<p>Systems of Equations- Algebraically</p>	<p>Solve a system of equations graphically and algebraically.</p> <p>Solve a system of equations and check the solution graphically (show that there is one solution, no solutions or infinitely many solutions graphically)</p> <p>Explain the solution of a system of equations is the intersection point on the graph.</p> <p>Match the solution set to the corresponding graph (Example, a graph a parallel lines has no solution)</p> <p>Justify the method used to solve the system of equations</p> <p>Checking the answer of a solution</p> <p>Show that multiplying an equation by a coefficient does not affect the solution of a system</p>	<p>7.1-Solve linear systems by graphing</p> <p>7.2-Solve linear systems by substitution</p> <p>7.3-Solving Linear Systems by adding and subtracting</p> <p>7.4-Solve linear systems by multiplying first</p> <p>7.5-Solve special types of linear system</p> <p>**Being able to check and explain why the solution of the system is the intersection, matching type of solution (1 solution, no solution or many) to the graph</p> <p>**Identify and using constraints or restrictions within word problems**</p> <p>**Ability to explain, solve, check solution sets**</p>	<p>Systems of Equations</p> <p>Solution Set</p> <p>Intersection point</p> <p>Coordinates</p> <p>Parallel lines</p>	<p>Why is the intersection of two equations the solution set of the system?</p> <p>What are different strategies you can use to solve systems of equations?</p> <p>How do you know if your solution set is correct?</p> <p>How do the forms of the equations determine your solution strategy?</p>
--	--	--	--	--	--

<p>A-REI.12. Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.</p>	<p>Graphing Inequalities</p>	<p>Graph an inequality and shade correctly</p> <p>Identify the difference between a strict boundary and where a boundary is not included (dotted vs. solid line)</p> <p>Graph two inequalities on a coordinate grid and identify their solution.</p>	<p>6.7-Graph Linear inequalities in two variables</p> <p>7.6-Solve systems of linear inequalities</p> <p>**Identify and using constraints or restrictions within word problems**</p>	<p>Half-Plane Boundary</p> <p>Strict boundary</p> <p>Interval Notation (i.e. $-5 < x < 12$)</p> <p>Included vs. not included</p> <p>Coordinate Grid</p>	<p>How can you tell from a graph if there is a strict boundary or the boundary is not included?</p> <p>How do you graph an inequality?</p> <p>How do you determine where to shade on the graph?</p> <p>How does the shading determine your solution set?</p>
<p>A-CED.3-Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different food.</p>	<p>Writing Equations</p>	<p>Explain why a solution is valid or not</p> <p>Explain what the solution means in a specific context</p> <p>Explain if a solution makes sense of not</p> <p>Identify the correct domain for the solution within the constraints of a word problem</p> <p>Write the correct inequality symbol based on a word problem</p> <p>Solve systems of inequalities and identify the correct domain for the solution in the context of a word problem.</p>	<p>1.4-Write equations and inequalities</p> <p>Word Problems-6.7 and 7.6</p> <p>EXPAND</p>	<p>Domain Boundary</p> <p>Viable</p> <p>Solution/intersection point</p> <p>Inclusive</p> <p>Exclusive</p> <p>Constraint</p> <p>Greater than (or equal to)</p> <p>Less than (or equal to)</p>	<p>How do you write an equation of a system of inequalities from a graph?</p> <p>How do you determine if your equations represent</p> <p>How do you determine if your graph is a representation of the equations given?</p> <p>Does the context of the problem limit your solution set?</p> <p>How do you use the context of the problem to determine the solution set?</p>

Functions					
<p>F-IF.1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.</p>	<p>Domain and Range</p>	<p>Identify the domain as the x-values</p> <p>Identify the range as the y-values</p> <p>Define a function as mapping one element of the domain to exactly one element of the range (one to one)</p> <p>Write equation in function notation</p> <p>Graph function $y=f(x)$</p>	<p>1.6-Representing Functions as Rules and Tables</p> <p>4.7-Graph Linear Functions</p>	<p>Domain</p> <p>Range</p> <p>Function Notation</p> <p>Vertical Line test</p> <p>Mapping</p> <p>Continuous</p> <p>Discrete</p> <p>Relation</p>	<p>On a graph, what are the domain values?</p> <p>On a graph, what are the range values?</p>
<p>F-IF.2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.</p>	<p>Function Notation</p>	<p>Evaluate a function for a given a given value of x, using function notation.</p> <p>Define $f(x)$ and $g(x)$</p> <p>Define the function for a given set of outputs</p>	<p>4.7-Graph Linear Functions</p> <p>Supplemental Materials</p>	<p>Function notation</p> <p>Input</p> <p>output</p>	<p>What is a function and how can I write a relationship in function notation?</p>

<p>F-IF.5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.</p>	<p>Domain</p>	<p>Write the correct domain for a function</p> <p>Identify an appropriate domain for a function in the context of a word problem.</p>	<p>4.7-Graph Linear Functions-Word Problems 1.6-Representing Functions as Rules and tables-Word Problems Supplemental Material with emphasis on domain</p>	<p>Domain</p>	<p>How is domain affected within the context of a real-world problem?</p>
---	---------------	---	---	---------------	---

<p>A-REI.11. Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.</p>	<p>Function Values</p>	<p>Calculate the y-values given x-values of an equation.</p> <p>Identify the graph for an algebraic equation (linear, polynomial, and exponential).</p> <p>Substitute the coordinate (x, y) into $y=f(x)$ and $y=g(x)$ to verify that the point is the solution to the system.</p> <p>Graph functions and find solutions to systems of equations on my calculator.</p> <p>Construct a table of values for any equation (linear, polynomial and exponential) using my calculator</p>		<p>Function Function Notation Family of functions</p>	<p>Looking at a graph, how can you determine the family the function belongs to?</p> <p>How can we use function notation to verify the solution of a system of functions?</p> <p>How can you use technology to graph and generate tables of different functions (i.e. linear, exponential, and polynomial)?</p>
--	------------------------	--	--	---	---

*Additional materials, not necessary