ALGEBRA I

STANDARDS	IFD
PLC HUB	OTHER

QUARTER 1 (47 DAYS)

PACING	TN STANDARDS	TEXT/RESOURCES	LEARNING TARGETS	ASSESSMENT/PROJECTS
15 days *PLUS - Aimsweb Testing (1 day)*	A1.A.SSE.A.1.b, A1.A.REI.A.1, A1.A.REI.B.2, A1.A.REI.B.2.a Solve linear equations with a variable on one side or both sides, and identify equations with no solution or infinitely many solutions. A1.A.CED.A.1 Create linear and absolute value equations and use them to solve real-life problems. A1.N.Q.A.1, A1.N.Q.A.1.b, A1.N.Q.A.1.c Use unit analysis to model real-life problems. A1.N.Q.A.1.d Choose an appropriate level of accuracy for measurements when solving real-life problems. A1.A.REI.A.1, A1.A.REI.B.2, A1.A.REI.B.2.b Solve absolute value equations involving one or two absolute values, and identify equations with extraneous solutions. A1.A.CED.A.4 Rewrite and use literal equations and common formulas.	**Chapter 1: Solving Linear Equations** This chapter presents the foundational skills related to solving linear equations and the connected skills of rewriting equations and formulas. 1.1 Solving Simple Equations 1.2 Solving Multi-Step Equations 1.3 Modeling Quantities 1.4 Accuracy with Measurements 1.5 Solving Equations with Variables on Both Sides 1.7 Rewriting Equations and Formulas	Chapter 1: Understand solving linear equations. ❖ Write and solve one-step linear equations. ❖ Write and solve multi-step linear equations. ❖ Use proportional reasoning and analyze units when solving problems. ❖ Choose an appropriate level of accuracy when calculating with measurements. ❖ Write and solve equations with variables on both sides. ❖ Solve literal equations for given variables.	1.1-1.3 Quiz Chapter 1 Test Performance Task: Students will record their water activities and water consumption for one week. Then they will make a plan to reduce the amount of water they use each week. *Key VocabularyTerms:* ● *equation* ● *precision* ● *linear equation in one variable* ● *accuracy* ● *solution* ● *identity* ● *equivalent equations* ● *absolute value equation* ● *ratio* ● *extraneous solution proportion* ● *literal equation* ● *rate* ● *formula*

14 days *PLUS - Benchmark Testing (2 days)*	A1.A.SSE.A.1.a Graph and interpret linear inequalities. A1.A.CED.A.1 Write linear inequalities from graphs. A1.A.CED.A.1 Create linear and absolute value inequalities and use them to solve real-life problems. A1.A.REI.B.2, A1.A.REI.B.2.a, A1.A.REI.B.2.b Solve multi-step, compound, and absolute value inequalities, and identify inequalities with no solution, one solution, or infinitely many solutions.	**Chapter 2: Solving Linear Equations** This chapter presents the skills and understanding related to solving linear inequalities, and the connected skills of solving absolute value inequalities. 2.1 Writing and Graphing Inequalities 2.2 Solving Inequalities Using Addition or Subtraction 2.3 Solving Inequalities Using Multiplication or Division 2.4 Solving Multi-Step Inequalities 2.5 Solving Compound Inequalities 2.6 Solve Absolute Value Inequalities	Chapter 2: Understand solving linear inequalities. ❖ Write inequalities and represent solutions of inequalities on number lines. ❖ Write and solve inequalities using addition or subtraction. ❖ Write and solve inequalities using multiplication or division. ❖ Write and solve multi-step inequalities. ❖ Write and solve compound inequalities. ❖ Write and solve inequalities involving absolute value.	2.1-2.3 Quiz Chapter 2 Test Performance Task: Students will use inequalities to determine whether climbers are falling behind during an expedition to Mount Everest. *Key Vocabulary Terms:* ● *inequality* ● *equivalent inequalities* ● *solution of an inequality* ● *compound inequality* ● *solution set* ● *absolute value inequality* ● *graph of an inequality* ● *absolute deviation*
10 days	A1.F.IF.A.1, A1.F.IF.A.2.a, A1.F.IF.A.2.b Understand the definition of a function and use function notation. A1.F.IF.A.3 Understand geometric formulas as functions. A1.F.IF.B.4 Sketch a graph of a function from a verbal description. A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare properties of the same function on two different intervals or properties of two different functions. A1.F.LE.A.1.a, A1.F.LE.A.1.b Identify functions that are linear and understand that linear functions grow by equal differences over equal intervals. A1.A.CED.A.2, A1.A.REI.D.5, A1.F.IF.C.7 Graph linear and	**Chapter 3: Graphing Linear Equations** *Functions were introduced in grade 8. Students may remember a "function machine" in which an input value is entered, a rule is applied, and the output value is obtained. There is a pairing of the input and output, and each input is associated with exactly one output.* Chapter 3 extends this introductory understanding so that functions are seen as describing situations in which one quantity determines another. Function notation and characteristics of functions are also studied, often in the context of graphing linear functions. 3.1 Functions 3.2 Characteristics of Functions 3.3 Linear Functions 3.4 Function Notation 3.5 Graphing Linear Equation in	Chapter 3: Understand graphing linear functions. ❖ Understand the concept of a function. ❖ Describe characteristics of functions. ❖ Identify and graph linear functions. ❖ Understand and use function notation. ❖ Graph and interpret linear equations written in standard form.	3.1-3.3 Quiz *Key Vocabulary Terms:* ● *relation* ● *standard form* ● *function* ● *slope* ● *domain* ● *rise* ● *range* ● *run* ● *independent variable* ● *slope-intercept form* ● *dependent variable* ● *constant function* ● *x-intercept* ● *family of functions* ● *y-intercept* ● *parent function* ● *increasing* ● *decreasing* ● *transformation* ● *translation*

	absolute value functions, and show key features of the graph. A1.F.IF.B.5 Relate the domain of a linear function to its context. A1.A.SSE.A.1.a Interpret parts of an algebraic expression. A1.F.IF.B.4 Interpret the slope and intercepts of a linear function. A1.A.CED.A.2, A1.F.LE.B.3 Solve real-life problems using function notation, linear equations, slopes, and y-intercepts. A1.F.BF.B.2 Translate, reflect, stretch, and shrink graphs of linear and absolute value functions.	Standard Form		● *end behavior* ● *reflection* ● *linear equation in two variables* ● *horizontal shrink* ● *linear function* ● *horizontal stretch* ● *nonlinear function* ● *vertical stretch* ● *solution of a linear equation in two variables* ● *vertical shrink* ● *discrete domain* ● *absolute value function* ● *continuous domain* ● *vertex* ● *function notation* ● *vertex form*
QUARTER 2 (39 DAYS)				
PACING	TN STANDARDS	TEXT/RESOURCES	LEARNING TARGETS	ASSESSMENT/PROJECTS
7 days *PLUS - ACT Day - EOC Bootcamp* *PSAT Day* *CASE Test Corrections*	A1.F.IF.A.1, A1.F.IF.A.2.a, A1.F.IF.A.2.b Understand the definition of a function and use function notation. A1.F.IF.A.3 Understand geometric formulas as functions. A1.F.IF.B.4 Sketch a graph of a function from a verbal description. A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare properties of the same function on two different intervals or properties of two different functions.	**Chapter 3: Graphing Linear Equations continued** *Functions were introduced in grade 8. Students may remember a "function machine" in which an input value is entered, a rule is applied, and the output value is obtained. There is a pairing of the input and output, and each input is associated with exactly one output.* Chapter 3 extends this introductory understanding so that functions are seen as describing situations in which one quantity determines another. Function notation and characteristics of functions are also studied, often in	Chapter 3: Understand graphing linear functions. ❖ Understand the concept of a function. ❖ Describe characteristics of functions. ❖ Identify and graph linear functions. ❖ Understand and use function notation. ❖ Graph and interpret linear equations written in standard form. ❖ Find the slope of a line and use slope-intercept form. ❖ Graph transformations of linear functions. ❖ Graph absolute value functions.	3.4-3.6 Quiz Chapter 3 Test Performance Task: Students will plan a dive. They will include a graph to show the amount of oxygen remaining over time. They will also explain how to increase the duration of the dive and model the change in time using transformations. *Key Vocabulary Terms:* ● *relation* ● *standard form*

	A1.F.LE.A.1.a, A1.F.LE.A.1.b Identify functions that are linear and understand that linear functions grow by equal differences over equal intervals. A1.A.CED.A.2, A1.A.REI.D.5, A1.F.IF.C.7 Graph linear and absolute value functions, and show key features of the graph. A1.F.IF.B.5 Relate the domain of a linear function to its context. A1.A.SSE.A.1.a Interpret parts of an algebraic expression. A1.F.IF.B.4 Interpret the slope and intercepts of a linear function. A1.A.CED.A.2, A1.F.LE.B.3 Solve real-life problems using function notation, linear equations, slopes, and y-intercepts. A1.F.BF.B.2 Translate, reflect, stretch, and shrink graphs of linear and absolute value functions.	the context of graphing linear functions. 3.6 Graphing Linear Equations in Slope-Intercept Form 3.7 Transformation of Linear Functions 3.8 Graphing Absolute Value Functions		• *function* • *slope* • *domain* • *rise* • *range* • *run* • *independent variable* • *slope-intercept form* • *dependent variable* • *constant function* • *x-intercept* • *family of functions* • *y-intercept* • *parent function* • *increasing* • *decreasing* • *transformation* • *translation* • *end behavior* • *reflection* • *linear equation in two variables* • *horizontal shrink* • *linear function* • *horizontal stretch* • *nonlinear function* • *vertical stretch* • *solution of a linear equation in two variables* • *vertical shrink* • *discrete domain* • *absolute value function* • *continuous domain* • *vertex* • *function notation* • *vertex form*
15 days	A1.A.CED.A.2, A1.F.BF.A.1.a, A1.F.LE.A.1.b, A1.F.LE.A.2 Create equations of linear functions using points and slopes. A1.A.CED.A.2, A1.F.LE.A.2 Identify, write, and use	**Chapter 4: Writing Linear Functions** Chapter 4 focuses on writing linear functions. Students create equations in two variables to represent relationships between	Chapter 4: Understand writing linear equations. ❖ Write equations of lines in slope-intercept form. ❖ Write equations of lines in point-slope form.	4.1-4.3 Quiz Chapter 4 Test Performance Task: Students will write to a government official proposing a new wind farm, using functions

	equations of parallel and perpendicular lines. A1.F.LE.B.3, A1.S.ID.B.4 Interpret scatter plots and fit linear functions to data to solve problems. A1.S.ID.C.5 Interpret the slope and y-intercept of a linear model. A1.S.ID.C.6 Use technology to find lines of best fit and compute the correlation coefficient of a linear model. Interpret the correlation coefficient in the context of the data. A1.S.ID.C.7 Distinguish between correlation and causation. A1.F.BF.A.1.a, A1.F.LE.A.2 Identify, extend, and graph arithmetic sequences, and write them as functions. A1.A.SSE.A.1.b, A1.A.CED.A.2, A1.F.IF.C.7 Evaluate, graph, and write piecewise functions. A1.F.IF.B.5 Given a function that models a real-life situation, explain what the domain represents.	quantities. Information may be given in the form of data, a context, or a graph and students are asked to write a linear function. Understanding that the information represents a linear function is incorporated in the learning. 4.1 Writing Equations in Slope-Intercept Form 4.2 Writing Equations in Point-Slope Form 4.3 Writing Equations of Parallel and Perpendicular Lines 4.4 Scatter Plots and Lines of Fit 4.5 Analyzing Lines of Fit 4.6 Arithmetic Sequences 4.7 Piecewise Functions	❖ Recognize and write equations of parallel and perpendicular lines. ❖ Use scatter plots and lines of fit to describe relationships between data. ❖ Analyze lines of fit and find lines of best fit. ❖ Understand the concept of arithmetic sequences. ❖ Graph and write piecewise functions.	and graphs to display cost, total power, and energy output. *Key Vocabulary Terms:* ❖ *linear model* ❖ *correlation coefficient* ❖ *point-slope form* ❖ *interpolation* ❖ *parallel lines* ❖ *extrapolation* ❖ *perpendicular lines* ❖ *causation* ❖ *scatter plot* ❖ *sequence* ❖ *correlation* ❖ *term* ❖ *line of fit* ❖ *arithmetic sequence* ❖ *residual* ❖ *common difference* ❖ *linear regression* ❖ *piecewise function* ❖ *line of best fit* ❖ *step function*
7 days *Plus - Benchmark Test (2 days)* *Semester Exams and Review (5 days)*	A1.A.CED.A.3, A1.A.REI.C.4 Write and solve systems of linear equations by graphing, substitution, and elimination. A1.A.CED.A.3, A1.A.REI.D.6 Create and solve linear and absolute value equations by graphing. A1.A.CED.A.3 Create and use linear inequalities and systems of linear inequalities to solve	**Chapter 5: Solving Systems of Linear Equations** Chapter 5 focuses on writing and solving systems of linear equations and inequalities. The big understanding for students is that a solution of a system must satisfy every equation or inequality in the system. Many of the applications in this chapter require students to write a system	Chapter 5: Understand solving systems of linear equations. ❖ Solve linear systems by graphing. ❖ Solve linear systems by substitution. ❖ Solve linear systems by elimination.	5.1-5.3 Quiz *Semester 1 Exam (Chapters 1-5) *Key Vocabulary Terms:* ● *system of linear equations* ● *solution of a system of linear equations* ● *linear inequality in two variables* ● *solution of a linear inequality in two variables*

	real-life problems. A1.A.REI.D.7 Graph the solution set of a system of linear inequalities in two variables.	to represent a context, which is an essential skill for modeling with mathematics. 5.1 Solving Systems of Linear Equations by Graphing 5.2 Solving Systems of Linear Equations by Substitution 5.3 Solving Systems of Linear Equations by Elimination		● *graph of a linear inequality* ● *half-planes* ● *system of linear inequalities* ● *solution of a system of linear inequalities* ● *graph of a system of linear inequalities*
QUARTER 3 (47 DAYS)				
PACING	TN STANDARDS	TEXT/RESOURCES	LEARNING TARGETS	ASSESSMENT/PROJECTS
11 days	A1.A.CED.A.3, A1.A.REI.C.4 Write and solve systems of linear equations by graphing, substitution, and elimination. A1.A.CED.A.3, A1.A.REI.D.6 Create and solve linear and absolute value equations by graphing. A1.A.CED.A.3 Create and use linear inequalities and systems of linear inequalities to solve real-life problems. A1.A.REI.D.7 Graph the solution set of a system of linear inequalities in two variables.	**Chapter 5: Solving Systems of Linear Equations** Chapter 5 focuses on writing and solving systems of linear equations and inequalities. The big understanding for students is that a solution of a system must satisfy every equation or inequality in the system. Many of the applications in this chapter require students to write a system to represent a context, which is an essential skill for modeling with mathematics. 5.4 Solving Special Systems of Linear Equations 5.5 Solving Equations by Graphing 5.6 Graphing Linear Inequalities in Two VAriables 5.7 Systems of Linear Inequalities	Chapter 5: Understand solving systems of linear equations. ❖ Solve linear systems by graphing. ❖ Solve linear systems by substitution. ❖ Solve linear systems by elimination. ❖ Solve linear systems with different numbers of solutions. ❖ Solve equations by graphing. ❖ Graph linear inequalities in two variables. ❖ Graph and write systems of linear inequalities.	5.4-5.7 Quiz Chapter 5 Test Performance Task: Students will create plans for piloting a manned dive to the Challenger Deep. They will determine how much time to spend descending, on the ocean floor, and ascending. Students will use a graph to represent their plans. *Key Vocabulary Terms:* ● *system of linear equations* ● *solution of a system of linear equations* ● *linear inequality in two variables* ● *solution of a linear inequality in two variables* ● *graph of a linear inequality* ● *half-planes* ● *system of linear inequalities* ● *solution of a system of linear inequalities* ● *graph of a system of linear*

				inequalities
20 days	A1.A.SSE.A.1.a Interpret coefficients, constants, and factors of polynomial expressions. A1.A.APR.A.1 Add, subtract, multiply, and divide polynomials. A1.A.REI.A.1, A1.A.REI.A.3.a Solve polynomial equations by factoring and using the Zero-Product Property.	**Chapter 7: Polynomial Equations and Factoring** Chapter 7 focuses on performing operations with polynomials and factoring polynomials to solve equations and reveal roots of polynomials. 7.1 Adding and Subtracting Polynomials 7.2 Multiplying and Dividing Polynomials 7.3 Special Products of Polynomials 7.4 Solving Polynomial Equations in Factored Form 7.5 Factoring $x^2 + bx + c$ 7.6 Factoring $ax^2 + bx + c$ 7.7 Factoring Special Products 7.8 Factoring Polynomials Completely	Chapter 7: Understand polynomial equations and factoring. ❖ Add and subtract polynomials. ❖ Multiply and divide polynomials. ❖ Use patterns to find products of polynomials. ❖ Solve polynomial equations in factored form. ❖ Factor polynomials of the form x^2+bx+c. ❖ Factor polynomials of the form $ax^2 + bx + c$. ❖ Recognize and factor special products. ❖ Factor a polynomial by grouping and recognize when a polynomial is factored completely.	7.1-7.4 Quiz Chapter 7 Test Performance Task: Students will write a given expression as a polynomial in standard form for a dropped object. They will make a prediction, perform an experiment, and create a display that compares the initial height of an object that hits the ground after 1 second on each planet. *Key Vocabulary Terms:* ● *monomial* ● *closed* ● *degree of a monomial* ● *FOIL Method* ● *polynomial* ● *factored form* ● *binomial* ● *Zero-Product Property* ● *trinomial* ● *roots* ● *degree of a polynomial* ● *repeated roots* ● *standard form* ● *factoring by grouping* ● *leading coefficient* ● *factored completely*
8 days Plus - Benchmark Test (2 days) Corrections	A1.A.CED.A.2 Create and graph quadratic functions of different forms. A1.F.IF.C.7 Graph quadratic functions and show key features of the graph. A1.F.BF.B.2 Translate, reflect,	**Chapter 8: Graphing Quadratic Functions** Chapter 8 focuses on graphing quadratic functions. Students will analyze different forms of quadratic functions to identify characteristics. Standard form and	Chapter 8: Understand graphing quadratic functions. ❖ Graph and describe functions of the form $f(x)=ax^2$. ❖ Graph and describe functions of the form $f(x)=ax^2+c$. ❖ Graph and describe functions of the form	8.1-8.3 Quiz *Key Vocabulary Terms:* ● *quadratic function* ● *minimum value* ● *parabola* ● *even function* ● *vertex*

	stretch, and shrink graphs of quadratic functions. A1.F.IF.B.4 For quadratic functions, interpret key features of graphs and tables. A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare properties of two different functions or the same function on two different intervals. A1.F.BF.A.1.a Write recursive rules for quadratic functions. A1.F.IF.C.8.a Use factoring to write equivalent forms of a quadratic function to show zeros, extreme values, and symmetry of the graph. A1.A.CED.A.2 Use characteristics to graph and write quadratic functions. A1.F.IF.B.6 Calculate and interpret average rates of change of linear, exponential, and quadratic functions. Estimate rates of change from graphs. A1.F.IF.B.6, A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare linear, exponential, and quadratic functions using average rates of change.	vertex form are developed by transforming the parent function f(x) = x^2. Intercept form is developed from identifying the x-intercepts of the graph. 8.1 Graphing f (x) = ax^2 8.2 Graphing f (x) = $ax^2 + c$ 8.3 Graphing f (x) = $ax^2 + bx + c$	$f(x)=ax^2+bx+c$.	• *odd function* • *axis of symmetry* • *vertex form (of a quadratic function)* • *zero of a function* • *intercept form* • *maximum value* • *average rate of change*

QUARTER 4 (47 DAYS)

PACING	TN STANDARDS	TEXT/RESOURCES	LEARNING TARGETS	ASSESSMENT/PROJECTS
6 days Plus - ACT day	A1.A.CED.A.2 Create and graph quadratic functions of different forms.	**Chapter 8: Graphing Quadratic Functions**	Chapter 8: Understand graphing quadratic functions. ❖ Graph and describe functions of the form $f(x)=ax^2$.	Chapter 8 Test Performance Task:

	A1.F.IF.C.7 Graph quadratic functions and show key features of the graph. A1.F.BF.B.2 Translate, reflect, stretch, and shrink graphs of quadratic functions. A1.F.IF.B.4 For quadratic functions, interpret key features of graphs and tables. A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare properties of two different functions or the same function on two different intervals. A1.F.BF.A.1.a Write recursive rules for quadratic functions. A1.F.IF.C.8.a Use factoring to write equivalent forms of a quadratic function to show zeros, extreme values, and symmetry of the graph. A1.A.CED.A.2 Use characteristics to graph and write quadratic functions. A1.F.IF.B.6 Calculate and interpret average rates of change of linear, exponential, and quadratic functions. Estimate rates of change from graphs. A1.F.IF.B.6, A1.F.IF.C.9.a, A1.F.IF.C.9.b Compare linear, exponential, and quadratic functions using average rates of change.	Chapter 8 focuses on graphing quadratic functions. Students will analyze different forms of quadratic functions to identify characteristics. Standard form and vertex form are developed by transforming the parent function $f(x) = x^2$. Intercept form is developed from identifying the x-intercepts of the graph. 8.4 Graphing $f(x) = a(x - h)^2 + k$ 8.5 Using Intercept Form 8.6 Comparing Linear, Exponential, and Quadratic Functions	❖ Graph and describe functions of the form $f(x)=ax^2+c$. ❖ Graph and describe functions of the form $f(x)=ax^2+bx+c$. ❖ Graph and describe functions of the form $f(x)=a(x-h)^2+k$. ❖ Graph and use functions in intercept form. ❖ Compare the characteristics of linear, exponential, and quadratic functions.	Students will write a report for a wildlife commission that analyzes data regarding the number of sea turtle nests in a region over time. Students will include a function and graph that represents the data, predictions based on the current trend, U.S. threats to the turtles, suggestions for conservation methods, and nesting goals for the future. *Key Vocabulary Terms:* ● *quadratic function* ● *minimum value* ● *parabola* ● *even function* ● *vertex* ● *odd function* ● *axis of symmetry* ● *vertex form (of a quadratic function)* ● *zero of a function* ● *intercept form* ● *maximum value* ● *average rate of change*
11 days Plus - Review for EOC (5-7	preparing for A1.A.CED.A.4, A1.A.REI.B.3.a Simplify expressions and perform operations using properties of radicals.	**Chapter 9: Solving Quadratic Equations** Chapter 9 focuses on solving	Chapter 9: Understand solving quadratic equations. ❖ Use properties of radicals to write	9.1-9.2 Quiz Chapter 9 Test Performance Task:

days)	A1.A.REI.B.3.a, A1.F.IF.B.4 Solve quadratic equations by graphing, using square roots, and the Quadratic Formula. A1.F.IF.B.4 For quadratic functions, interpret key features of graphs and tables. A1.F.IF.C.7 Graph quadratic functions and show key features of the graph. A1.S.ID.B.4 Write quadratic equations to model data. A1.A.CED.A.1 Create quadratic equations and use them to solve real-life problems. A1.A.CED.A.4 Rearrange formulas to highlight a quantity of interest. A1.A.REI.B.3.b Solve quadratic inequalities in one variable.	quadratic equations using a variety of methods: graphing, using square roots, and using the Quadratic Formula. Students will consider which method is most efficient as they learn new methods. 9.1 Properties of Radicals 9.2 Solving Quadratic Equations by graphing 9.3 Solving Quadratic Equations Using Square Roots 9.4 Solving Quadratic Equations Using the Quadratic Formula 9.5 Solving Quadratic Inequalities	equivalent expressions. ❖ Use graphs to solve quadratic equations and find zeros of functions. ❖ Solve quadratic equations using square roots. ❖ Use the Quadratic Formula and its discriminant to solve and analyze quadratic equations. ❖ Solve quadratic inequalities in one variable.	Students will conduct research to find an equation for luminosity. They will use the formula for the surface area of a sphere to explain the rationale behind the luminosity equation. They will then use the luminosity equation to find the distance between stars. *Key Vocabulary Terms:* ● *radical expression* ● *quadratic equation* ● *simplest form of a radical* ● *Quadratic Formula* ● *rationalizing the denominator* ● *discriminant* ● *conjugates* ● *like radicals* ● *quadratic inequality in one variable*
8 days Plus - EOC Testing	A1.S.ID.A.1 Find and compare the mean, median, and mode of a data set. A1.S.ID.A.3 Identify the effects of data transformations on measures of center and measures of variation. A1.S.ID.A.3 Use box-and-whisker plots to compare data sets. A1.S.ID.A.2, A1.S.ID.A.3 Describe shapes of distributions, use them to determine which measures of center and variation best represent a data set, and compare shapes of distributions.	**Chapter 10: Data Analysis and Displays** Chapter 10 focuses on interpreting qualitative and quantitative data. This includes summarizing, representing, interpreting, and analyzing data, noting any patterns or deviations from patterns. The center and spread of a data set are important, along with knowing which statistics to compare, which data display to use, and what the results of a comparison might mean. 10.1 Measures of Center and Variation	Chapter 10: Understand data. ❖ Find measures of center and variation of a data set. ❖ Make and interpret box-and-whisker plots for data sets. ❖ Describe and compare shapes of distributions. ❖ Use appropriate data displays to represent situations.	Chapter 10 Test Performance Task: Students will create a survey on the use of robotics that involves both qualitative and quantitative data. They will survey at least 50 people and record their results. They will then analyze their data and create a presentation of their findings. *Key Vocabulary Terms:* ● *measure of center* ● *box-and-whisker plot* ● *mean* ● *quartile* ● *median*

	A1.N.Q.A.1.a Choose and create appropriate data displays, and analyze misleading data displays.	10.2 Box-and-Whisker Plots 10.3 Shapes of Distributions 10.4 Choosing a Data Display		● *five-number summary* ● *mode* ● *interquartile range* ● *outlier* ● *qualitative (categorial) data* ● *measure of variation* ● *quantitative data* ● *range* ● *misleading graph* ● *data transformation*
10 days Plus- Final Exams	A1.A.SSE.A.1.b Evaluate and simplify expressions with exponents. A1.F.LE.A.1.a Understand that exponential functions grow by equal factors over equal intervals. A.F.LE.A.1.a Distinguish between linear and exponential functions. A1.F.IF.C.7 Graph exponential functions and show key features of the graphs. A1.A.CED.A.2, A1.F.BF.A.1.a, A1.F.LE.A.2, A1.S.ID.B.4 Write exponential equations to model data. A1.A.SSE.A.1.b, A1.A.CED.A.2, A1.F.BF.A.1.a, A1.F.LE.A.1.c Use, identify, interpret, and rewrite exponential growth and decay functions to solve real-life problems. A1.F.BF.A.1.a, A1.F.LE.A.2 Identify, extend, and graph geometric sequences, and write them as functions. A1.F.BF.A.1.a, A1.F.LE.A.2 Write terms and rules of	**Chapter 6: Exponential Functions and Sequences** Chapter 6 focuses on understanding exponential functions and sequences. Students will review the properties of integer exponents, which leads to an introduction of exponential functions and then making a connection between exponential functions and geometric sequences. 6.1 Properties of Exponents 6.2 Exponential Functions 6.3 Exponential Growth and Decay 6.4 Geometric Sequences 6.5 Recursively Defined Sequences	Chapter 6: Understand exponential functions and sequences. ❖ Write equivalent expressions involving powers. ❖ Graph and write exponential functions. ❖ Write and graph exponential growth and decay functions. ❖ Identify, extend, and graph geometric sequences. ❖ Write terms of recursively defined sequences and write recursive rules for sequences.	6.1-6.2 Quiz Chapter 6 Test *Final Exam Performance Task: Students will write a report for a health organization. The report will detail the spread of Ebola virus without an available immunization. They will include equations for the numbers of confirmed cases and fatalities, as well as steps for reducing the reproductive number. *Key Vocabulary Terms:* ● *exponential function* ● *compound interest* ● *asymptote* ● *geometric sequence* ● *exponential growth* ● *common ratio* ● *exponential growth function* ● *explicit rule* ● *exponential decay* ● *recursive rule* ● *exponential decay function*

	recursively defined sequences. A1.F.BF.A.1.a Translate between recursive and explicit rules.			