

Wyoming Department of Education Required Virtual Education Course Syllabus

Niobrara County School District # 1

Program Name	Wyoming Virtual Academy	Content Area	MA
Course ID	D-MTH-129BV1ST-K	Grade Level	9-12
Course Name	Summit Algebra 1 Honors- Sem 2	# of Credits	0.5
SCED Code	02052H0.5022	Curriculum Type	K12 Inc

COURSE DESCRIPTION

Generally offered 2nd Semester. K12's Algebra 1 Honors Summit course is intended to formalize and extend the mathematics that students learned in the middle grades. Because it is built to follow revised middle school math courses, the course covers slightly different ground than previous versions of algebra. In this course, students deepen their understanding of linear and exponential relationships by contrasting them with each other. Students also apply linear models to data that exhibit a linear trend. The course also covers analyzing, solving, and using quadratic functions. Specific topics include systems of equations, polynomials, quadratic equations, quadratic function, univariate data, and bivariate data. This course includes all the topics in MTH128 as well as several extension activities. Each semester also includes an independent honors project.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
A.APR.1	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.
A.APR.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.
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.*
A.CED.4	Rearrange 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 .*
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.*
A.REI.4	Solve quadratic equations in one variable.
A.REI.4a	Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.

A.REI.4b	Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b .
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.
A.REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
A.REI.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.
A.SSE.1	Interpret expressions that represent a quantity in terms of its context.*
A.SSE.1a	Interpret parts of an expression, such as terms, factors, and coefficients.*
A.SSE.1b	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 .*
A.SSE.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.
A.SSE.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.*
A.SSE.3a	Factor a quadratic expression to reveal the zeros of the function it defines.*
A.SSE.3b	Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.*
F.BF.3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.
F.IF.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*
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.*
F.IF.6	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*

F.IF.7	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*
F.IF.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima.*
F.IF.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
F.IF.8a	Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
F.LE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.*
N.Q.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.*
S.IC.6	Evaluate reports based on data.*
S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).*
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.*
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).*
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.*
S.ID.6	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.*
S.ID.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.*
S.ID.8	Compute (using technology) and interpret the correlation coefficient of a linear fit.*
S.ID.9	Distinguish between correlation and causation.*

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1: Systems of Equations Lesson 1: Exchange Ideas	A.REI.5	<p>Justify the linear combination method.</p> <p>Solve a system of two linear equations in two variables using the linear combination method (without multiplication).</p> <p>Solve a system of two linear equations in two variables using the linear combination method (with multiplication).</p>

<p>Unit 1: Systems of Equations Lesson 2: Graphs of Systems</p>	<p>A.REI.6</p>	<p>Solve a system of two linear equations in two variables by graphing.</p> <p>Classify a system of two linear equations in two variables.</p>
<p>Unit 1: Systems of Equations Lesson 3: Approximate Solutions with Graphs</p>	<p>A.REI.6</p>	<p>Approximate the solutions of a system of two linear equations in two variables by graphing.</p>
<p>Unit 1: Systems of Equations Lesson 4: Graph Systems to Solve Equations</p>	<p>A.REI.11</p>	<p>Explain how to solve $f(x) = g(x)$ by graphing.</p> <p>Solve the equation $f(x) = g(x)$ by graphing.</p> <p>Solve the equation $f(x) = g(x)$ by making a table of values.</p>
<p>Unit 1: Systems of Equations Lesson 5: Your Choice</p>	<p>A.REI.5 A.REI.6 A.REI.11</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>
<p>Unit 1: Systems of Equations Lesson 6: Substitution Method</p>	<p>A.REI.6</p>	<p>Solve a system of two linear equations in two variables using the substitution method.</p>
<p>Unit 1: Systems of Equations Lesson 7: Linear Combination</p>	<p>A.REI.5</p>	<p>Justify the linear combination method.</p> <p>Solve a system of two linear equations in two variables using the linear combination method (without multiplication).</p>
<p>Unit 1: Systems of Equations Lesson 8: Linear Combination with Multiplication</p>	<p>A.REI.5</p>	<p>Justify the linear combination method.</p> <p>Solve a system of two linear equations in two variables using the linear combination method (with multiplication).</p>
<p>Unit 1: Systems of Equations Lesson 9: Applications: Systems of Linear Equations</p>	<p>A.REI.6</p>	<p>Write and solve a system of equations to model a real-world problem.</p>
<p>Unit 1: Systems of Equations Lesson 10: Unit Review</p>	<p>A.REI.5 A.REI.6 A.REI.11</p>	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit.

		<ul style="list-style-type: none"> • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
Unit 1: Systems of Equations Lesson 11: Unit Test	A.REI.5 A.REI.6 A.REI.11	Demonstrate knowledge on concepts in this unit.
Unit 2: Polynomials Lesson 1: Exchange Ideas	A.SSE.3	<p>Determine the roots of a quadratic equation by converting it to factored form.</p> <p>Determine the zeros of a quadratic function by converting it to factored form.</p>
Unit 2: Polynomials Lesson 2: Overview of Polynomials	A.APR.1	<p>Determine whether an expression is a polynomial.</p> <p>Classify polynomials.</p>
Unit 2: Polynomials Lesson 3: Add and Subtract Polynomials	A.APR.1	<p>Solve problems involving the closure properties of polynomials.</p> <p>Explain under which operations polynomials are closed.</p> <p>Add polynomials.</p> <p>Subtract polynomials.</p>
Unit 2: Polynomials Lesson 4: Multiply with Monomials	A.APR.1	<p>Solve problems involving the closure properties of polynomials.</p> <p>Explain under which operations polynomials are closed.</p> <p>Multiply monomials.</p> <p>Multiply a polynomial by a monomial.</p>
Unit 2: Polynomials Lesson 5: Your Choice	A.APR.1 A.APR.3 A.SSE.2 A.SSE.3	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>

<p>Unit 2: Polynomials Lesson 6: Multiply Polynomials</p>	<p>A.APR.1</p>	<p>Solve problems involving the closure properties of polynomials.</p> <p>Explain under which operations polynomials are closed.</p> <p>Multiply two binomials.</p> <p>Multiply a binomial and a trinomial.</p> <p>Multiply two trinomials.</p>
<p>Unit 2: Polynomials Lesson 7: Your Choice</p>	<p>A.APR.1 A.APR.3 A.SSE.2 A.SSE.3</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>
<p>Unit 2: Polynomials Lesson 8: Common Factors of Polynomials</p>	<p>A.SSE.2</p>	<p>Determine the greatest common monomial factor in an expression.</p> <p>Factor an expression by factoring out the greatest common monomial factor.</p>
<p>Unit 2: Polynomials Lesson 9: Factor Perfect Squares</p>	<p>A.SSE.2</p>	<p>Determine whether a polynomial is a perfect square trinomial.</p> <p>Factor a perfect square trinomial.</p>
<p>Unit 2: Polynomials Lesson 10: Factor Differences of Squares</p>	<p>A.SSE.2</p>	<p>Determine whether a polynomial is a difference of squares.</p> <p>Factor a difference of squares.</p>
<p>Unit 2: Polynomials Lesson 11: Factor Quadratic Trinomials</p>	<p>A.SSE.2</p>	<p>Factor a quadratic trinomial ($a = 1$) into two binomials.</p>
<p>Unit 2: Polynomials Lesson 12: Find Roots of a Polynomial</p>	<p>A.APR.3 A.SSE.3</p>	<p>Determine the roots of a quadratic equation by converting it to factored form.</p> <p>Determine the zeros of a quadratic function by converting it to factored form.</p> <p>Determine the zeros of a polynomial function (with polynomial of degree three or higher).</p>

<p>Unit 2: Polynomials Lesson 13: Unit Review</p>	<p>A.APR.1 A.APR.3 A.SSE.2 A.SSE.3</p>	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit. • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
<p>Unit 2: Polynomials Lesson 14: Unit Test</p>	<p>A.APR.1 A.APR.3 A.SSE.2 A.SSE.3</p>	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Algebra 1 Checkpoint 3</p>	<p>A.APR.1 A.APR.3 A.REI.5 A.REI.6 A.REI.11 A.SSE.2 A.SSE.3</p>	<p>Demonstrate knowledge on concepts in this semester.</p>
<p>Unit 3: Quadratic Equations Lesson 1: Exchange Ideas</p>	<p>A.REI.4</p>	<p>Derive the quadratic formula.</p> <p>Solve quadratic equations by using the quadratic formula.</p> <p>Determine whether the solutions of a quadratic equation are real or complex by evaluating the discriminant.</p> <p>Describe the solutions of a quadratic equation by evaluating the discriminant.</p>
<p>Unit 3: Quadratic Equations Lesson 2: Solve Perfect Square Equations</p>	<p>A.REI.4, b</p>	<p>Solve quadratic equations by taking the square root of each side.</p>
<p>Unit 3: Quadratic Equations Lesson 3: Complete the Square</p>	<p>A.REI.4, a-b</p>	<p>Transform a quadratic equation into a perfect square equation by completing the square.</p> <p>Solve quadratic equations by completing the square.</p>
<p>Unit 3: Quadratic Equations Lesson 4: The Quadratic Formula</p>	<p>A.REI.4, a-b</p>	<p>Derive the quadratic formula.</p> <p>Solve quadratic equations by using the quadratic formula.</p>

<p>Unit 3: Quadratic Equations Lesson 5: The Discriminant</p>	<p>A.REI.4, a-b</p>	<p>Determine whether the solutions of a quadratic equation are real or complex by evaluating the discriminant.</p> <p>Solve quadratic equations algebraically.</p>
<p>Unit 3: Quadratic Equations Lesson 6: Your Choice</p>	<p>A.CED.1 A.CED.4 A.REI.4, a-b A.SSE.1, a-b A.SSE.2</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>
<p>Unit 3: Quadratic Equations Lesson 7: Solve Quadratic Equations</p>	<p>A.REI.4, b</p>	<p>Explain which method or methods for solving a given quadratic equation are most appropriate.</p> <p>Solve quadratic equations algebraically.</p>
<p>Unit 3: Quadratic Equations Lesson 8: Formulas with Quadratics</p>	<p>A.CED.4</p>	<p>Solve a formula for a specific variable.</p>
<p>Unit 3: Quadratic Equations Lesson 9: Applications: Quadratic Equations</p>	<p>A.CED.1 A.SSE.1, a-b A.SSE.2</p>	<p>Interpret parts of a quadratic expression within the context of the situation it represents.</p> <p>Solve problems by writing and solving quadratic equations in one variable.</p>
<p>Unit 3: Quadratic Equations Lesson 10: Unit Review</p>	<p>A.CED.1 A.CED.4 A.REI.4, a-b A.SSE.1, a-b A.SSE.2</p>	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit. • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
<p>Unit 3: Quadratic Equations Lesson 11: Unit Test</p>	<p>A.CED.1 A.CED.4 A.REI.4, a-b A.SSE.1, a-b A.SSE.2</p>	<p>Demonstrate knowledge on concepts in this unit.</p>

<p>Unit 4: Quadratic Functions Lesson 1: Exchange Ideas</p>	<p>A.APR.3 A.SSE.3 F.IF.8, a</p>	<p>Determine the x-intercepts of a quadratic function, given a function equation that can be factored.</p> <p>Convert a quadratic function from standard form to vertex form.</p> <p>Determine the zeros of a quadratic function by converting it to factored form.</p> <p>Determine the maximum or minimum of a quadratic function by converting it to vertex form.</p> <p>Determine the number of zeros a quadratic function has given its equation.</p> <p>Convert a quadratic function from factored form to standard form.</p> <p>Convert a quadratic function from standard form to factored form.</p> <p>Convert a quadratic function from vertex form to standard form.</p>
<p>Unit 4: Quadratic Functions Lesson 2: Standard Form of a Quadratic Function</p>	<p>F.IF.7, a</p>	<p>Graph a quadratic function, given its equation in standard form.</p> <p>Graph a quadratic function, given its equation in any form.</p>
<p>Unit 4: Quadratic Functions Lesson 3: Other Forms of a Quadratic Function</p>	<p>A.APR.3 F.IF.7, a</p>	<p>Graph a quadratic function, given its equation in factored or factorable form.</p> <p>Graph a quadratic function, given its equation in vertex form.</p>
<p>Unit 4: Quadratic Functions Lesson 4: Convert Between Forms</p>	<p>A.APR.3 A.SSE.3, a, b F.IF.8, a</p>	<p>Determine the x-intercepts of a quadratic function, given a function equation that can be factored.</p> <p>Convert a quadratic function from standard form to vertex form.</p> <p>Determine the zeros of a quadratic function by converting it to factored form.</p> <p>Determine the maximum or minimum of a quadratic function by converting it to vertex form.</p>

		<p>Determine the number of zeros a quadratic function has given its equation.</p> <p>Convert a quadratic function from factored form to standard form.</p> <p>Convert a quadratic function from vertex form to standard form.</p> <p>Convert a quadratic function from standard form to factored form.</p>
<p>Unit 4: Quadratic Functions Lesson 5: Your Choice</p>	<p>A.APR.3 A.CED.1 A.REI.7 A.SSE.3 F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3</p>	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>
<p>Unit 4: Quadratic Functions Lesson 6: Transform Quadratic Functions</p>	<p>F.BF.3</p>	<p>Describe the effect a given parameter has on a graph.</p> <p>Determine the equation of a quadratic function that is a transformation of the parent quadratic function, from its graph.</p> <p>Determine the equation of a quadratic function that is a transformation of another quadratic function, given the equation of the original function.</p> <p>Graph a quadratic function, given the graph of its parent function.</p>
<p>Unit 4: Quadratic Functions Lesson 7: Quadratic Rates of Change</p>	<p>F.IF.6 F.LE.3</p>	<p>Compare growth rates of exponential and polynomial functions.</p> <p>Calculate a function's average rate of change over a specified interval, given the equation of the function.</p> <p>Calculate a function's average rate of change over a specified interval, given a table of values.</p>

		Approximate a function's average rate of change over a specified interval, given the graph of the function.
Unit 4: Quadratic Functions Lesson 8: Linear and Quadratic Systems	A.REI.7	Solve a system containing one linear equation and one quadratic equation, in two variables, algebraically. Solve a system containing one linear equation and one quadratic equation, in two variables, graphically.
Unit 4: Quadratic Functions Lesson 9: Your Choice	A.APR.3 A.CED.1 A.REI.7 A.SSE.3 F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3	You may use today's lesson time to <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. Go on to the next lesson.
Unit 4: Quadratic Functions Lesson 10: Model with Quadratic Functions	A.CED.1	Solve problems by writing and using quadratic function equations. Solve problems by writing and graphing quadratic function equations.
Unit 4: Quadratic Function Lesson 11: Interpret Quadratic Function Graphs	F.IF.4	Interpret key features of a quadratic function, from a graph, in terms of the real-world context it represents. Interpret key features of a quadratic function, from a table, in terms of the real-world context it represents.
Unit 4: Quadratic Functions Lesson 12: Unit Review	A.APR.3 A.CED.1 A.REI.7 A.SSE.3 F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3	Use today's lesson time to prepare for the Unit Test. You may <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit. • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
Unit 4: Quadratic Functions Lesson 13: Unit Test	A.APR.3 A.CED.1 A.REI.7 A.SSE.3 F.BF.3	Demonstrate knowledge on concepts in this unit.

	<p>F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3</p>	
<p>Algebra 1 Checkpoint 4</p>	<p>A.APR.1 A.APR.3 A.CED.1 A.CED.4 A.REI.4, a-b A.REI.5 A.REI.6 A.REI.7 A.REI.11 A.SSE.1, a-b A.SSE.2 A.SSE.3, a, b F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3</p>	<p>Demonstrate knowledge on concepts in this semester.</p>
<p>Unit 5: Univariate Data Lesson 1: Exchange Ideas</p>	<p>S.ID.2</p>	<p>Determine the range of a data set.</p> <p>Determine the interquartile range of a data set.</p> <p>Determine the standard deviation of a data set.</p>
<p>Unit 5: Univariate Data Lesson 2: Measures of Center</p>	<p>N.Q.3 S.ID.2</p>	<p>Determine a level of accuracy appropriate to a situation.</p> <p>Determine the mean of a data set.</p> <p>Determine the median of a data set.</p> <p>Determine the mode of a data set.</p> <p>Solve real-world problems involving the mean of a data set.</p>
<p>Unit 5: Univariate Data Lesson 3: Frequency Distributions</p>	<p>S.ID.1</p>	<p>Represent data with a dot plot.</p> <p>Represent data with a histogram.</p> <p>Represent data with a frequency table.</p> <p>Interpret a dot plot.</p>

		Interpret a histogram.
Unit 5: Univariate Data Lesson 4: Box-and-Whisker Plots	S.ID.1	Represent data with a box plot. Determine the five-number summary of a data set. Interpret a box plot.
Unit 5: Univariate Data Lesson 5: Your Choice	N.Q.3 S.ID.1 S.ID.2 S.ID.3	You may use today's lesson time to <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. Go on to the next lesson.
Unit 5: Univariate Data Lesson 6: Measures of Spread	S.ID.2	Determine the range of a data set. Determine the interquartile range of a data set. Solve problems involving measures of spread. Determine the standard deviation of a data set.
Unit 5: Univariate Data Lesson 7: Appropriate Measures	S.ID.2 S.ID.3	Compare the centers of two or more data sets. Compare the spreads of two or more data sets. Determine the best measure or measures of center for a data set. Interpret differences in the centers of data sets in the context of the real-world situations they represent.
Unit 5: Univariate Data Lesson 8: Extended Problems: Compare Data Sets	S.ID.2	<ol style="list-style-type: none"> 1. Draw and interpret histograms. 2. Find the mean, median, and mode of data sets. 3. Find the five-number summary of sets of data. 4. Draw and interpret box-and-whisker plots for data sets.

<p>Unit 5: Univariate Data Lesson 9: Fences and Outliers</p>	<p>S.ID.1 S.ID.3</p>	<p>Represent data with a modified box plot.</p> <p>Determine whether a value in a data set is an outlier.</p>
<p>Unit 5: Univariate Data Lesson 10: Unit Review</p>	<p>N.Q.3 S.ID.1 S.ID.2 S.ID.3</p>	<p>Use today’s lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit. • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
<p>Unit 5: Univariate Data Lesson 11: Unit Test</p>	<p>N.Q.3 S.ID.1 S.ID.2 S.ID.3</p>	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Unit 6: Bivariate Data Lesson 1: Exchange Ideas</p>	<p>S.ID.9</p>	<p>Explain the difference between correlation and causation.</p> <p>Explain a likely reason two variables are correlated.</p>
<p>Unit 6: Bivariate Data Lesson 2: Make Two-Way Tables</p>	<p>S.ID.5</p>	<p>Represent data in two-way tables.</p>
<p>Unit 6: Bivariate Data Lesson 3: Interpret Two-Way Tables</p>	<p>S.ID.5</p>	<p>Interpret two-way tables.</p> <p>Convert two-way tables to two-way relative frequency tables.</p> <p>Interpret two-way relative frequency tables.</p>
<p>Unit 6: Bivariate Data Lesson 4: Scatter Plots</p>	<p>S.ID.6, a-c</p>	<p>Represent data with a scatter plot.</p> <p>Interpret a scatter plot.</p>
<p>Unit 6: Bivariate Data Lesson 5: Association</p>	<p>S.ID.8</p>	<p>Determine the strength and direction of the association between two variables.</p>
<p>Unit 6: Bivariate Data Lesson 6: The Correlation Coefficient</p>	<p>S.ID.8</p>	<p>Determine the correlation coefficient of a data set.</p> <p>Estimate a correlation coefficient for data in a scatter plot.</p> <p>Interpret a correlation coefficient.</p>
<p>Unit 6: Bivariate Data Lesson 7: Correlation and Causation</p>	<p>S.ID.9</p>	<p>Explain the difference between correlation and causation.</p>

		Explain a likely reason two variables are correlated.
Unit 6: Bivariate Data Lesson 8: Your Choice	S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9	<p>You may use today's lesson time to</p> <ul style="list-style-type: none"> • Complete work in progress. • Review prior lessons in the unit to prepare for the Unit Test. • Post or respond to posts on the discussion board for the Exchange Ideas activity in this unit. • Prepare for your state standardized test. <p>Go on to the next lesson.</p>
Unit 6: Bivariate Data Lesson 9: Fit a Line to Data	S.ID.6, a S.ID.7	<p>Determine a linear function equation to fit a data set.</p> <p>Solve problems using the linear function equation that models a data set.</p> <p>Interpret the slope of a linear model in the context of the data.</p> <p>Interpret the y-intercept of a linear model in the context of the data.</p>
Unit 6: Bivariate Data Lesson 10: Least Squares Regression	S.ID.6, a S.ID.7	<p>Determine a linear function equation to fit a data set.</p> <p>Solve problems using the linear function equation that models a data set.</p> <p>Interpret the slope of a linear model in the context of the data.</p> <p>Interpret the y-intercept of a linear model in the context of the data.</p>
Unit 6: Bivariate Data Lesson 11: Quadratic Regression Models	S.ID.6, a	<p>Determine a quadratic function equation to fit a data set.</p> <p>Solve problems using the quadratic function equation that models a data set.</p>
Unit 6: Bivariate Data Lesson 12: Exponential Regression Models	S.ID.6, a	<p>Determine which type of function best fits a data set, using the coefficient of determination.</p> <p>Determine an exponential function equation to fit a data set.</p>

		<p>Solve problems using the exponential function equation that models a data set.</p> <p>Determine which type of function appears to best fit a data set, given its scatter plot.</p>
<p>Unit 6: Bivariate Data Lesson 13: Residuals</p>	<p>S.ID.6, b</p>	<p>Determine the residual for a specified x-value.</p> <p>Represent residuals with a residual plot.</p> <p>Explain, using a residual plot, whether a given type of model is appropriate for a data set.</p>
<p>Unit 6: Bivariate Data Lesson 14: Unit Review</p>	<p>S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9</p>	<p>Use today's lesson time to prepare for the Unit Test. You may</p> <ul style="list-style-type: none"> • Revisit Review activities located before each quiz in the unit. • Look at the Summary activities in each lesson. • Read through the Reference Guide pages linked in each lesson. • Ask for help on any Practice problems you did not fully understand.
<p>Unit 6: Bivariate Data Lesson 15: Unit Test</p>	<p>S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9</p>	<p>Demonstrate knowledge on concepts in this unit.</p>
<p>Unit 7: Honors Project: Company Data Lesson 1: Company Data</p>	<p>S.IC.6 S.ID.6, c</p>	<p>Compare the centers of two or more data sets.</p> <p>Determine the mean of a data set.</p> <p>Represent numerical data on a box plot.</p> <p>Select the most appropriate sampling technique for a given study.</p> <p>Interpret the standard deviation of a data set.</p> <p>Determine the model fit of a straight line on a scatter plot by judging the closeness of the data points to the line.</p>
<p>Unit 7: Honors Project: Company Data Lesson 2: Samples and Histograms</p>	<p>S.IC.6 S.ID.6, c</p>	<p>Compare the centers of two or more data sets.</p>

		<p>Determine the mean of a data set.</p> <p>Represent numerical data on a box plot.</p> <p>Select the most appropriate sampling technique for a given study.</p> <p>Interpret the standard deviation of a data set.</p> <p>Determine the model fit of a straight line on a scatter plot by judging the closeness of the data points to the line.</p>
<p>Unit 7: Honors Project: Company Data Lesson 3: Scatter Plots</p>	<p>S.IC.6 S.ID.6, c</p>	<p>Compare the centers of two or more data sets.</p> <p>Determine the mean of a data set.</p> <p>Represent numerical data on a box plot.</p> <p>Select the most appropriate sampling technique for a given study.</p> <p>Interpret the standard deviation of a data set.</p> <p>Determine the model fit of a straight line on a scatter plot by judging the closeness of the data points to the line.</p>
<p>Unit 7: Honors Project: Company Data Lesson 4: Continue Working with Scatter Plots</p>	<p>S.IC.6 S.ID.6, c</p>	<p>Compare the centers of two or more data sets.</p> <p>Determine the mean of a data set.</p> <p>Represent numerical data on a box plot.</p> <p>Select the most appropriate sampling technique for a given study.</p> <p>Interpret the standard deviation of a data set.</p> <p>Determine the model fit of a straight line on a scatter plot by judging the closeness of the data points to the line.</p>
<p>Unit 7: Honors Project: Company Data Lesson 5: Make Data- Based Predictions</p>	<p>S.IC.6 S.ID.6, c</p>	<p>Compare the centers of two or more data sets.</p>

		<p>Determine the mean of a data set.</p> <p>Represent numerical data on a box plot.</p> <p>Select the most appropriate sampling technique for a given study.</p> <p>Interpret the standard deviation of a data set.</p> <p>Determine the model fit of a straight line on a scatter plot by judging the closeness of the data points to the line.</p>
<p>Unit 8: Algebra 1 Semester A and B Assessments Lesson 1: Semester A Test, Parts 1 and 2</p>	<p>A.APR.1 A.APR.3 A.CED.1 A.CED.4 A.REI.4, a-b A.REI.5 A.REI.6 A.REI.7 A.REI.11 A.SSE.1 A.SSE.2 A.SSE.3, a, b F.BF.3 F.IF.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3 N.Q.3 S.ID.1 S.ID.2 S.ID.3 S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9</p>	<p>Demonstrate knowledge on concepts in this semester.</p>
<p>Unit 8: Algebra 1 Semester A and B Assessments Lesson 2: Your Choice</p>	<p>A.APR.1 A.APR.3 A.CED.1 A.CED.4 A.REI.4, a-b A.REI.5 A.REI.6 A.REI.7 A.REI.11</p>	<p>Demonstrate knowledge on concepts in this semester.</p>

	<p>A.SSE.1 A.SSE.2 A.SSE.3, a, b F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3 N.Q.3 S.ID.1 S.ID.2 S.ID.3 S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9</p>	
<p>Unit 8: Algebra 1 Semester A and B Assessments Lesson 3: Semester B Test, Parts 1 and 2</p>	<p>A.APR.1 A.APR.3 A.CED.1 A.CED.4 A.REI.4, a-b A.REI.5 A.REI.6 A.REI.7 A.REI.11 A.SSE.1 A.SSE.2 A.SSE.3, a, b F.BF.3 F.If.4 F.IF.6 F.IF.7, a F.IF.8, a F.LE.3 N.Q.3 S.ID.1 S.ID.2 S.ID.3 S.ID.5 S.ID.6, a-c S.ID.7 S.ID.8 S.ID.9</p>	<p>Demonstrate knowledge on concepts in this semester.</p>