Wyoming Department of Education
Required Virtual Education Course Syllabus

2201000 - Washakie County School District No. 1

Program Name	Washakie #1 Online	Content Area	MA
Course ID	W02056G0.5012	Grade Level	10 - 12
Course Name	WOL-Algebra II-A	# of Credits	0.5
SCED Code	02056G0.5012	Curriculum Type	K-12 Fuel Education

COURSE DESCRIPTION

This course builds upon algebraic concepts covered in Algebra I and prepares students for advanced level courses. Students extend their knowledge and understanding by solving open-ended problems and thinking critically. Topics include conic sections, functions and their graphs, quadratic functions, inverse functions, and advanced polynomial functions. Students are introduced to rational, radical, exponential, and logarithmic functions; sequences and series; and data analysis. Students work on additional challenging assignments, assessments, and research projects.

WYOMING CONTENT AND PERFORMANCE STANDARDS	
STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
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.*
A.SSE.3c	Use the properties of exponents to transform expressions for exponential functions. For example the expression 1.15^t can be rewritten as [1.15^(1/12)]^(12t) ≈ 1.012^(12t) to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*
A.SSE.4	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.*
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.2	Know and apply the Remainder Theorem: For a polynomial p(x) and a number a, the remainder on division by x – a is p(a), so p(a) = 0 if and only if (x – a) is a factor of p(x).
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.APR.4	Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity (x^2 + y^2)^2 = (x^2 – y^2)^2 + (2xy)^2 can be used to generate Pythagorean triples.
A.APR.5	(+)Know and apply the Binomial Theorem for the expansion of (x + y)n in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.1
A.APR.6	Rewrite simple rational expressions in different forms; write a(x)/b(x) in the form q(x) + r(x)/b(x), where a(x), b(x), q(x), and r(x) are polynomials with the degree of r(x) less than the degree of b(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.
A.APR.7	(+)Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.
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.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 non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.*
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.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.
A.REI.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.
A.REI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
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 ± 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.

WYOMING CONTENT AND PERFORMANCE STANDARDS	
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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.REI.8	(+)Represent a system of linear equations as a single matrix equation in a vector variable.
A.REI.9	(+)Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 × 3 or greater).
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).
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.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.
F.BF.1a	Determine an explicit expression, a recursive process, or steps for calculation from a context.
F.BF.1b	Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.
F.BF.1c	(+)Compose functions. For example, if T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time.
F.BF.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.*
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.BF.4a	Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. For example, f(x) =2(x^3) or f(x) = (x+1)/(x-1) for x ≠ 1 (x not equal to 1).
F.BF.4b	(+)Verify by composition that one function is the inverse of another.
F.BF.4d	(+)Produce an invertible function from a non-invertible function by restricting the domain.
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).
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.
F.IF.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n+1) = f(n) + f(n-1) for n ≥ 1 (n is greater than or equal to 1).
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.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima.*
F.IF.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.*
F.IF.7d	(+)Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.*
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.

WYOMING CONTENT AND PERFORMANCE STANDARDS	
STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
F.LB.1a	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.
F.LB.5	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.
N. CN.2	Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation (y – 2)/(x –1) = 3. Noticing the regularity in the way terms cancel when expanding (x – 1)(x + 1), (x – 1)(x^2 + x + 1), and (x – 1)(x^3 + x^2 + x + 1) might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.
N.CN.1	Know there is a complex number i such that i^2 = −1, and every complex number has the form a + bi with a and b real.
N.CN.4	(+)Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.
N.CN.6	(+)Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.
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.*
N.Q.2	Define appropriate quantities for the purpose of descriptive modeling.*
N.RN.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.
S.ID.6b	Informally assess the fit of a function by plotting and analyzing residuals.*

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Semester 1		
Unit 1: Numbers, Expressions, and Equations • Semester Introduction • Sets of Numbers • Number Lines and Absolute Value • Number Properties • Evaluating Expressions • Solving Equations • Solving Absolute Value Equations • Applications: Formulas	A-SSE.1a A-CED.1	• Determine whether real numbers are natural numbers, whole numbers, integers, rational numbers, or irrational numbers. • Describe sets using a verbal description, roster notation, and set-builder notation. • Determine intersections and unions of sets of numbers. • Use the properties of opposites and absolute value to simplify, evaluate, and compare expressions. • Find rational numbers that are between two rational numbers. • Identify properties of real numbers and use them to simplify numeric and algebraic expressions. • Determine whether sets are closed under operations. • Simplify expressions involving exponents. • Determine whether real numbers are natural numbers, whole numbers, integers, rational numbers, or irrational numbers. • Describe sets using a verbal description, roster notation, and set-builder notation. • Determine intersections and unions of sets of numbers. • Find rational numbers that are between two rational numbers. • Determine whether sets are closed under operations. • Use the properties of opposites and absolute value to simplify, evaluate, and compare expressions. • Simplify expressions involving exponents. • Identify properties of real numbers and use them to simplify numeric and algebraic expressions. • Evaluate and compare numerical and algebraic expressions. • Write and/or evaluate expressions to solve real-world problems. • Write and solve equations to model real-world problems. • Use the properties of equality to solve equations. • Write and solve equations to model real-world problems. • Solve absolute value equations. • Identify any extraneous solutions to an absolute value equation. • Solve formulas for specified variables. • Solve a formula for specified variables. • Use formulas to solve real-world problems. • Find the value of a variable in a formula, given the value(s) of the other variable(s).
Unit 2: Linear Equations and Systems • Graphs of Lines • Forms of Linear Equations • Writing Equations of Lines • Applications: Linear Equations • Systems of Linear Equations, Part 1 • Systems of Linear Equations, Part 2 • Applications: Linear Systems	A-REI.5,6,11 F-IF.7a F-LB.1a,5 S-ID.6b	• Find the x- and y-intercepts of a line, given the equation of the line. • Draw graphs of lines, given the equation. Determine slopes of lines, given the graph or equation. • Convert between forms of linear equations. • Graph equations of lines given in slope-intercept form, standard form, or point-slope form. • Find equations of lines, given the slope and y-intercept, the slope and a point on the line, or two points on the line. • Given the equations of two lines, determine whether their graphs are parallel, perpendicular, or neither. • Find the x- and y-intercepts of a line, given the equation of the line. • Determine slopes of lines, given the graph or equation. • Draw graphs of lines, given the equation.

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
		• Convert between forms of linear equations. • Graph equations of lines given in slope-intercept form, standard form, or point-slope form. • Given the equations of two lines, determine whether their graphs are parallel, perpendicular, or neither. • Write and use linear equations to model and solve real-world problems. • Find equations of lines of best fit for data sets, and use them to make predictions. • Write and use linear equations to model and solve real-world problems. • Determine whether an ordered pair is a solution to a system of linear equations. • Solve systems of two equations with two variables by graphing, substitution, and/or linear combination. • Solve systems of two equations with two variables by graphing, substitution, or linear combination. • Determine whether an ordered pair is a solution to a system of linear equations with two variables. • Determine whether an ordered triple is a solution to a system of three linear equations with three variables. • Solve systems of three equations with three variables. • Write and solve systems of linear equations to model and solve real-world problems.
Unit 3: Functions • Function Basics • Function Equations • Absolute Value Functions • Piecewise Functions • Step Functions • Function Operations, Part 1 • Function Operations, Part 2 • Function Inverses	N-RN.,2 N-Q.2 A-SSE.3c A-APR.7 A-CED.1,2,3 A-REI.1,3,11 F-IF.1,2,3,7b F-BF.1a,1b,1c F-BF.2 F-BF.4a,4b,4d	• Determine whether relations (represented as a set of ordered pairs, a mapping diagram, or a graph) are functions. • Determine the domain and range of functions. • Draw graphs that represent real-world situations. • Use function notation to evaluate functions for a given value. • Draw the graph of a function and/or determine its domain and range. • Draw graphs of absolute value functions, determine the domain and range, and/or determine the coordinates of the vertex. • Determine equations of absolute value functions, given the graph or information about the graph. • Determine whether relations (represented as a set of ordered pairs, a mapping diagram, or a graph) are functions. • Determine the domain and range of functions. • Use function notation to evaluate functions for a given value. • Draw the graph of a function and/or determine its domain and range. • Draw graphs of absolute value functions, determine the domain and range, and/or determine the coordinates of the vertex. • Determine equations of absolute value functions, given the graph or information about the graph. • Draw the graph of piecewise functions, and/or evaluate a piecewise function for a given value. • Draw the graph of piecewise functions and/or evaluate a piecewise function for a given value. • Write a rule for piecewise functions, given the graph. • Draw or describe the graphs of step functions and/or evaluate a step function for a given value. • Write a rule for step functions, given the graph.

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
		• Determine the domain and range of functions. • Draw the graph of piecewise functions, and/or evaluate a piecewise function for a given value. • Draw the graph of piecewise functions and/or evaluate a piecewise function for a given value. • Find the sum, difference, product, or quotient and/or evaluate the sum, difference, product, or quotient of two functions for a given value. • Find the sum, difference, product, or quotient of two functions and/or evaluate the sum, difference, product, or quotient of two functions for a given value. • Determine the domain of functions that are the result of operations of functions. • Find the composition of two functions and/or evaluate the composition of two functions for a given value. • Determine the domain and range of functions that are the composition of two functions. • Find inverses of functions and/or evaluate inverse functions for a given value. • Determine whether the inverse of a function is a function, and/or verify that two functions are inverses of each other using function composition. • Determine whether the inverse of a function is a function and/or verify that two functions are inverses of each other using function composition.
Unit 4: Inequalities • Inequalities in One Variable • Compound Inequalities • Absolute Value Inequalities • Inequalities in Two Variables • Systems of Linear Inequalities • Linear Programming	A-REI.1,2	• Represent unbounded intervals using interval notation. • Solve inequalities and give the solution set graphically and using interval notation. • Represent bounded intervals using interval notation. • Solve compound inequalities and give the solution set graphically and using interval notation. • Represent a compound inequality using interval notation. • Represent unbounded intervals using interval notation. • Solve inequalities and give the solution set graphically and using interval notation. • Represent bounded intervals using interval notation. • Solve compound inequalities and give the solution set graphically and using interval notation. • Determine whether absolute value inequalities represent a conjunction or a disjunction. • Solve absolute value inequalities and represent the solution set as a compound inequality, using interval notation, and/or graphically. • Write a conjunction or disjunction that corresponds to a given absolute value inequality. • Identify real-world situations that can be described using conjunctions or disjunctions. • Draw graphs of linear inequalities in two variables. • Write linear inequalities in two variables, given the graph. • Determine whether ordered pairs are solutions to systems of linear inequalities in two variables. • Draw graphs of systems of linear inequalities in two variables. • Use linear programming to solve problems.
Unit 5: Polynomials and Power Functions	A-SSE.1b,2	• Add, subtract and/or simplify polynomial expressions.

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
• Working with Polynomials • Multiplying Polynomials • Factoring Patterns • More Factoring Patterns • Solving Polynomial Equations • Power Functions	A-APR.1,5F-BF.3	• Determine whether expressions are polynomial and/or classify polynomials by their degree or number of terms. • Find the degree, leading coefficient, and constant term of a polynomial and/or write polynomial expressions in standard form. • Multiply polynomial expressions. • Write polynomial expressions that represent the area of rectangles. • Use Pascal's triangle to write a binomial expansion. • Determine whether expressions are polynomial and/or classify polynomials by their degree or number of terms. • Find the degree, leading coefficient, and constant term of a polynomial and/or write polynomial expressions in standard form. • Add, subtract, and/or simplify polynomial expressions. • Multiply polynomial expressions. • Write polynomial expressions that represent the area of rectangles. • Add, subtract and/or simplify polynomial expressions. • Factor polynomial expressions by factoring out the greatest common monomial factor. • Factor trinomial expressions. • Use factoring patterns to factor polynomial expressions (difference of squares and perfect square trinomial). • Use factoring patterns to factor polynomial expressions (difference of squares, perfect square trinomials). • Use factoring patterns to factor polynomial expressions (sums and differences of cubes). • Factor polynomials by grouping. • Use the zero product property to solve polynomial equations. • Classify power functions represented in tables or graphically. • Draw, describe, or compare graphs of power functions. • Draw, describe or compare graphs of power functions. • Write equations of power functions, given the degree and a point on the graph. • Determine whether functions are even, odd, or neither. • Write equations of power functions given the degree and a point on the graph.
Unit 6: Rational Equations • Dividing Monomials and Polynomials • Operations with Rational Expressions, Part 1 • Operations with Rational Expressions, Part 2 • Compound Fractions • Solving Rational Equations, Part 1 • Solving Rational Equations, Part 2 • Reciprocal Power Functions • Graphing Rational Functions	A-APR.6,7 A-CED.1 A-REI.2 F-IF.4,5,7d F-BF.3	• Simplify rational expressions and/or determine the domain restrictions. • Determine the domain restrictions of rational expressions. • Simplify rational expressions. • Add and subtract rational expressions. • Add or subtract rational expressions. • Multiply or divide rational expressions. • Multiply rational expressions. • Divide rational expressions. • Add or subtract rational expressions. • Multiply or divide rational expressions. • Simplify rational expressions. • Determine domain restrictions. • Simplify compound fractions. • Solve rational equations. • Create rational equations and use them to solve problems.

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
		• Solve real-world problems involving rational equations. • Draw or describe graphs of reciprocal power functions and/or determine the domain and range. • Determine equations of reciprocal power functions, given the graph. • Draw graphs of rational functions and/or determine the domain and range. • Determine equations of asymptotes of rational functions. • Determine equations of rational functions, given the graph.
Unit 7: Radicals and Complex Numbers • Simplifying Radical Expressions • Fractional Exponents and Higher Roots • Graphing Radical Functions • Solving Radical Equations • Imaginary Numbers • Complex Numbers • Multiplying and Dividing Complex Numbers • Solving Equations with Complex Solutions	N-RN.2 N-CN.1,2,4,6 F-IF.7b	• Write radical expressions in simplified radical form (square roots only). • Add, subtract, multiply and divide radical expressions (square roots only). • Convert between radical form and rational exponent form. • Simplify expressions involving rational exponents. • Simplify radical expressions (3rd root and higher). • Draw or describe the graph of radical functions. • Complete a table of values for a radical function and draw the function. • Write radical expressions in simplified radical form (square roots only). • Convert between radical form and rational exponent form. • Simplify expressions involving rational exponents. • Add, subtract, multiply, and divide radical expressions (square roots only). • Simplify radical expressions (3rd root and higher). • Solve radical equations that are solved by squaring both sides twice. • Solve radical equations. • Draw or describe the graph of radical functions and/or determine the domain and range. • Write the equation of a radical function, given its graph. • Determine the domain and range of radical functions. • Simplify radical expressions that involve imaginary numbers. • Add, subtract, multiply, and divide imaginary numbers. • Add and subtract complex numbers. • Graph complex numbers in the complex plane. • Find the modulus of a complex number. • Multiply and divide complex numbers and write the result in standard form. • Identify conjugates of complex numbers. • Multiply a complex number by its conjugate. • Find a quadratic equation that has given solutions. • Solve quadratic equations that have real and complex solutions.
Unit 8: Quadratic Functions • Graphing Quadratic Functions • Properties of Quadratic Functions • Solving Quadratic Equations, Part 1 • Solving Quadratic Equations, Part 2 • Quadratic Inequalities • Finding a Quadratic from Points • Applications: Quadratic Functions	N-Q.1,2 A-SSE.3a,3b A-REI.4a,4b,10 F-IF.5,7a,8a F-BF.1a,3	• Draw graphs of quadratic functions in standard or factored forms. • Find the intercepts, axis of symmetry, and the coordinates of the vertex of a quadratic function. • Draw graphs of quadratic functions in vertex form. • Write equations of quadratic functions in vertex form, given the graph. • Convert from standard to vertex form of quadratic functions.

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UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
		• Find the maximum or minimum value of a quadratic expression by completing the square. • Draw graphs of quadratic functions in standard or factored forms. • Draw graphs of quadratic functions in vertex form. • Write equations of quadratic functions in vertex form, given the graph. • Find the intercepts, axis of symmetry, and the coordinates of the vertex of a quadratic function. • Convert from standard to vertex form of quadratic functions. • Solve quadratic equations by factoring. • Use graphs to describe solutions of quadratic equations. • Solve quadratic equations by completing the square. • Solve quadratic equations using the quadratic formula. • Use the discriminant to classify number and types of solutions of a quadratic equation. • Draw graphs of quadratic functions in standard or factored forms. • Draw graphs of quadratic functions in vertex form. • Write equations of quadratic functions in vertex form, given the graph. • Solve a quadratic inequality in one variable. • Graph the solution set of a quadratic inequality in two variables. • Find a quadratic function, given points on the graph. • Solve real-world problems using quadratic equations and functions.
Unit 9: Semester Review and Test • Semester Review • Semester Test		