

# 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-403BV1-K	Grade Level	9-12
Course Name	Pre-Calculus/Trigonometry - Semester 2	# of Credits	0.5
SCED Code	02110E0.5022	Curriculum Type	K12 Inc

### COURSE DESCRIPTION

*Generally offered second semester. Pre-calculus weaves together previous study of algebra, geometry, and functions into a preparatory course for calculus. The course focuses on the mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Topics include linear, quadratic, exponential, logarithmic, radical, polynomial, and rational functions; systems of equations; and conic sections in the first semester. The second semester covers trigonometric ratios and functions; inverse trigonometric functions; applications of trigonometry, including vectors and laws of cosine and sine; polar functions and notation; and arithmetic of complex numbers. Cross-curricular connections are made throughout the course to calculus, art, history, and a variety of other fields related to mathematics.*

### WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	<a href="#">BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets</a>
A.REI.6	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
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 $x \neq 1$ ( $x$ not equal to 1).
F.BF.4c	(+)Read values of an inverse function from a graph or a table, given that the function has an inverse.
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.Tf.1	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
F.TF.2	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
F.TF.3	(+)Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$ , $\pi/4$ and $\pi/6$ , and use the unit circle to express the values of sine, cosine, and tangent for $\pi - x$ , $\pi + x$ , and $2\pi - x$ in terms of their values for $x$ , where $x$ is any real number.

F.TF.4	(+)Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
F.TF.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.*
F.TF.6	(+)Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.
F.TF.7	(+)Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.*
F.TF.8	Prove the Pythagorean identity $(\sin A)^2 + (\cos A)^2 = 1$ and use it to find $\sin A$ , $\cos A$ , or $\tan A$ , given $\sin A$ , $\cos A$ , or $\tan A$ , and the quadrant of the angle.
F.TF.9	(+)Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.
G.CO.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
G.SRT.10	(+)Prove the Laws of Sines and Cosines and use them to solve problems.
G.SRT.11	(+)Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).
G.SRT.6	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
G.SRT.8	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.
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.2	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
N.CN.3	(+)Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.
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.5	(+)Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. For example, $(-1 + \sqrt{3}i)^3 = 8$ because $(-1 + \sqrt{3}i)$ has modulus 2 and argument $120^\circ$ .
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.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.

N.VM.1	(+)Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., $\mathbf{v}$ , $ v $ , $  v  $ , $v$ (not bold)).
N.VM.2	(+)Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
N.VM.3	(+)Solve problems involving velocity and other quantities that can be represented by vectors.
N.VM.4a	(+)Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.
N.VM.4b	(+)Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.
N.VM.4c	(+)Understand vector subtraction $v - w$ as $v + (-w)$ , where $(-w)$ is the additive inverse of $w$ , with the same magnitude as $w$ and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.
N.VM.5a	(+)Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v(\text{sub } x), v(\text{sub } y)) = (cv(\text{sub } x), cv(\text{sub } y))$ .
N.VM.5b	(+)Compute the magnitude of a scalar multiple $cv$ using $  cv   =  c v$ . Compute the direction of $cv$ knowing that when $ c v \neq 0$ , the direction of $cv$ is either along $v$ (for $c > 0$ ) or against $v$ (for $c < 0$ ).

**SCOPE AND SEQUENCE**

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1: Functions 1.01 What Is a Function? 1.01 Graded Assignment	0	Express and evaluate functions.  Distinguish between relations and functions.  Calculate domain and range of functions algebraically.  Identify domain and range of functions graphically.
1.01 Quiz: What Is a Function?	0	0
1.02 Graphing Functions 1.02 Learn: Testing and Special Functions	0	Express and evaluate functions.  Apply the horizontal line test to identify functions.  Graph and interpret functions.  Apply the vertical line test to identify functions.
1.02 Graded Assignment	0	0

1.02 Quiz: Graphing Functions	0	0
1.03 Linear Functions 1.03 Learn: Equations of Lines 1.03 Learn: Connecton to Art	0	Identify and interpret the equation of a line.  Identify and interpret a linear function.
1.03 Learn: Connection to Calculus 1.03 Graded Assignment	0	0
1.03 Quiz: Linear Functions	0	0
1.04 Arithmetic Sequences and Series 1.04 Learn: Sequences	0	Identify an arithmetic sequence.  Express an arithmetic sequence.  Compute the sum of a finite arithmetic series.  Identify uses of arithmetic sequence in ancient times.
1.04 Learn: Connection to History 1.04 Graded Assignment	0	0
1.04 Quiz: Arithmetic Sequences and Series 1.05 Linear Equations and Inequalities 1.05 Learn: On Equal Footing	0	Write the equation of a line.  Graph a linear equation.  Graph a linear inequality.
1.05 Graded Assignment 1.05 Quiz: Linear Equations and Inequalities	0	0
1.06 Linear Systems 1.06 Learn: System of Inequalities 1.06 Learn: Linear Programming Problem	0	Calculate the solution to a system of linear equations.  Compute and graph the solutions to a system of linear inequalities.  Explore multiple techniques for determining the solution(s) to a system.  Find the solution to a system of linear equations.  Find the solution to a system of linear inequalities.  Find the solution to a linear programming problem.

<p>1.06 Graded Assignment 1.06 Quiz: Linear Systems</p>	<p>0</p>	<p>0</p>
<p>1.07 Arithmetic of Functions 1.07 Learn: Mixing and Matching 1.07 Graded Assignment</p>	<p>0</p>	<p>Add, subtract, multiply, and divide functions.</p> <p>Compose two or more functions to form a new function.</p> <p>Apply the arithmetic of functions to solve problems.</p> <p>Perform basic arithmetic operations on functions.</p> <p>Compose two or more functions to form a new function.</p>
<p>1.07 Quiz: Arithmetic of Functions 1.08 Functions Wrap-Up 1.08 Discuss: What Questions Do You Have?</p>	<p>0</p>	<p>Express and evaluate functions.</p> <p>Apply the horizontal line test to identify functions.</p> <p>Identify and interpret the equation of a line.</p> <p>Identify and interpret a linear function.</p> <p>Identify an arithmetic sequence.</p> <p>Express an arithmetic sequence.</p> <p>Identify uses of arithmetic sequence in ancient times.</p> <p>Write the equation of a line.</p> <p>Graph a linear equation.</p> <p>Graph a linear inequality.</p> <p>Find the solution to a system of linear equations.</p> <p>Find the solution to a system of linear inequalities.</p> <p>Find the solution to a linear programming problem.</p>

		<p>Perform basic arithmetic operations on functions.</p> <p>Distinguish between relations and functions.</p> <p>Calculate domain and range of functions algebraically.</p> <p>Identify domain and range of functions graphically.</p> <p>Graph and interpret functions.</p> <p>Apply the vertical line test to identify functions.</p> <p>Compute the sum of a finite arithmetic series.</p> <p>Compose two or more functions to form a new function.</p> <p>Use graphing calculator.</p>
<p>1.08 Unit Review 1: Functions                  1.08 Review: Calculator Skills                  1.08 Graded Assignment: Functions</p>	0	0
<p>Review for test</p>	0	0
<p>Review for test, cont'd</p>	0	0
<p>1.08 Test, Part 1: Functions                  1.08 Test, Part 2: Functions</p>	<p>A.CED.3; A.REI.5,8-12;                  F.IF.1-3,5,7a,7b; F.BF.1b,                  1c, 2; F.LE. 1a,2,5;                  G.CO.1;</p>	0
<p>Unit 2: Quadratic Functions                  2.01 Forms of Quadratic Functions                  2.01 Learn: Quadratic Functions                  2.01 Graded Assignment</p>	0	<p>Identify quadratic functions.</p> <p>Identify the features of the graphs of quadratic functions.</p> <p>Describe various forms of quadratic functions including standard, vertex, and intercept forms.</p> <p>Convert a quadratic function from one form to another.</p>
<p>2.01 Quiz: Forms of Quadratic Functions</p>	0	0

<p>2.02 Graphing Quadratic Functions 2.02 Learn: Graphing Quadratic Functions 2.02 Graded Assignment</p>	0	Graph a quadratic equation.
<p>2.02 Quiz: Graphing Quadratic Functions</p>	0	0
<p>2.03 Transformations 2.03 Learn: Transformations of Quadratic Functions 2.03 Graded Assignment</p>	0	<p>Describe the effects of horizontal and vertical reflections on graphs of quadratic functions.</p> <p>Describe the effects of horizontal and vertical translations on graphs of quadratic functions.</p> <p>Describe the effects of horizontal and vertical stretches on graphs of quadratic functions.</p> <p>Differentiate between rigid and non-rigid transformation of a function.</p>
<p>2.03 Quiz: Transformations</p>	0	0
<p>2.04 Solving Quadratic Functions 2.04 Learn: Solving Quadratic Functions</p>	0	<p>Find optimum value of a quadratic function.</p> <p>Find the nature of the roots of a quadratic equation.</p> <p>Evaluate radical expressions.</p> <p>Solve a quadratic equation.</p>
<p>2.04 Learn: Connection to Calculus: Optimization 2.04 Graded Assignment</p>	0	0
<p>2.04 Quiz: Solving Quadratic Equations</p>	0	0
<p>2.05 Applications of Quadratic Functions 2.05 Learn: Applications of Quadratic Functions 2.05 Graded Assignment</p>	0	<p>Write quadratic equations that model problem situations.</p> <p>Solve quadratic functions that model problem situations.</p> <p>Interpret values of quadratic functions within the context of a problem.</p> <p>Write quadratic functions that model problem situations.</p>

2.05 Quiz: Applications of Quadratic Functions 2.06 Quadratic Functions Wrap-Up 2.06 Discuss: What Questions Do You Have?	0	0
2.06 Unit Review: Quadratic Functions 2.06 Review: Calculator Skills 2.06 Graded Assignment: Quadratic Functions	0	Identify the features of the graphs of quadratic functions.  Describe various forms of quadratic functions including standard, vertex, and intercept forms.  Graph a quadratic equation.  Identify quadratic functions.  Describe the effects of horizontal and vertical reflections on graphs of quadratic functions.  Describe the effects of horizontal and vertical translations on graphs of quadratic functions.  Describe the effects of horizontal and vertical stretches on graphs of quadratic functions.  Find the nature of the roots of a quadratic equation.  Write quadratic equations that model problem situations.  Evaluate radical expressions.  Solve a quadratic equation.
Review for test	0	0
Review for test, cont'd	0	0
2.06 Test, Part 1: Quadratic Functions 2.06 Test, Part 2: Quadratic Functions	N.Q.2; N.CN.7; A.SSE.1b,2,3a; A.CED.2; A.REI.4b; F.IF.4,7a,8a; F.BF.1a,3;	0
Unit 3: Polynomial and Rational Functions 3.01 Polynomial Expressions 3.01 Learn: What Is a Polynomial? 3.01 Graded Assignment	0	Identify key characteristics of a polynomial.  Predict behavior of the graph of a polynomial function.



3.01 Quiz: Polynomial Expressions	0	0
3.02 Dividing Polynomials 3.02 Learn: Long-Division Review 3.02 Graded Assignment	0	<p>Divide a polynomial by another polynomial.</p> <p>Use the factor theorem to test for the factor of a polynomial.</p> <p>Use the remainder theorem to evaluate a polynomial.</p>
3.02 Quiz: Dividing Polynomials	0	0
3.03 Solving Polynomial Equations 3.03 Learn: The Rational Root Theorem 3.03 Learn: Fundamental Theorem of of Arithmetic and Algebra	0	<p>List the possible roots for a polynomial function.</p> <p>State the fundamental theorem of arithmetic.</p> <p>State the fundamental theorem of algebra.</p> <p>State the fundamental theorem of calculus.</p>
3.03 Graded Assignment	0	0
3.03 Quiz: Solving Polynomial Equations	0	0
3.04 Graphing Polynomial Functions 3.04 Learn: Polynomial Functions and Graphs	0	<p>Identify key characteristics of the graph of a polynomial function using algebraic and graphical approaches.</p> <p>Identify the relation between the graphs of a function and its derivatives.</p>
3.04 Learn: Derivatives 3.04 Graded Assignment	0	0
3.04 Quiz: Graphing Polynomial Functions 3.05 Rational Functions 3.05 Learn: Asymptotes	0	<p>Determine the domain and range of a rational function.</p> <p>Identify all asymptotes of a rational function.</p> <p>Locate removable discontinuities of a rational function.</p> <p>Determine limit of a function at infinity using table of values.</p>

<p>3.05 Learn: Infinity 3.05 Graded Assignment</p>	<p>0</p>	<p>0</p>
<p>3.05 Quiz: Rational Functions 3.06 Polynomial and Rational Functions Wrap-Up 3.06 Discuss: What Questions Do You Have?</p>	<p>0</p>	<p>Identify key characteristics of a polynomial.</p> <p>Use graphic calculator to graph a function.</p> <p>Divide a polynomial by another polynomial.</p> <p>Use the factor theorem to test for the factor of a polynomial.</p> <p>List the possible roots for a polynomial function.</p> <p>State the fundamental theorem of algebra.</p> <p>Identify key characteristics of the graph of a polynomial function using algebraic and graphical approaches.</p> <p>Predict behavior of the graph of a polynomial function.</p> <p>Use the remainder theorem to evaluate a polynomial.</p> <p>Determine the domain and range of a rational function.</p> <p>Identify all asymptotes of a rational function.</p>
<p>3.06 Unit Review: Polynomial and Rational Functions 3.06 Review: Calculator Skills 3.06 Graded Assignment: Polynomial and Rational Functions</p>	<p>0</p>	<p>0</p>
<p>Review for test</p>	<p>0</p>	<p>0</p>
<p>Review for test, cont'd</p>	<p>0</p>	<p>0</p>
<p>3.06 Test, Part 1: Polynomial and Rational Functions 3.06 Test, Part 2: Polynomial and Rational Functions</p>	<p>N.CN.9; A.SSE.1a, 1b, 2; A.APR.2, 3, 6; F.IF.5, 7c, 7d</p>	<p>0</p>
<p>Unit 4: Exponential and Logarithmic Functions 4.01 Exponents and Radicals 4.01 Learn: Rational Exponents and Radical</p>	<p>0</p>	<p>Express repeated multiplication problems using exponents.</p>

<p>Expressions 4.01 Graded Assignment</p>		<p>Simplify expressions involving rational exponents.</p> <p>Draw or describe the graph of radical functions.</p>
<p>4.01 Quiz: Exponents and Radicals 4.02 Exponential Functions 4.02 Learn: Exponential Functions and Their Graphs</p>	<p>0</p>	<p>Identify and use the algebraic rules for exponents to simplify expressions.</p> <p>Draw or describe exponential functions and their graphs.</p> <p>Determine the domain and range of exponential functions.</p> <p>Use exponential functions to model real-world problems.</p>
<p>4.02 Learn: Connection to Science: Nuclear Decay 4.02 Graded Assignment</p>	<p>0</p>	<p>0</p>
<p>4.02 Quiz: Exponential Functions</p>	<p>0</p>	<p>0</p>
<p>4.03 Geometric Sequences 4.03 Learn: Leaps and Bounds 4.03 Learn: Connection to History: Zeno's Paradox</p>	<p>0</p>	<p>Identify and describe the key characteristics of geometric sequences.</p> <p>Define geometric sequences.</p> <p>Apply geometric sequences to real-world problems.</p>
<p>4.03 Learn: Connection to Calculus: Infinity 4.03 Graded Assignment</p>	<p>0</p>	<p>0</p>
<p>4.03 Quiz: Geometric Sequences 4.04 Introduction to Logarithms 4.04 Learn: Logarithms</p>	<p>0</p>	<p>Evaluate expressions using uncommon bases using the change-of-base formula.</p> <p>Convert between exponential and logarithmic expressions.</p> <p>Evaluate common and natural logarithms.</p> <p>Apply the rules of logarithms to rewrite expressions.</p>
<p>4.04 Learn: Connecton to Science: Earthquakes and the Richter Scale 4.04 Graded Assignment</p>	<p>0</p>	<p>0</p>
<p>4.04 Quiz: Introduction to Logarithms 4.05 Graphs of Logarithmic Functions 4.05 Learn: Undoing What You Have Done</p>	<p>0</p>	<p>Find the inverse function algebraically.</p> <p>Describe how exponential functions and logarithmic functions are</p>

		<p>inverses of each other.</p> <p>Describe the graphical relationship between a function and its inverse.</p> <p>Describe how the graphs of logarithmic functions are translated horizontally and vertically.</p> <p>Use logarithms to solve an equation containing a variable exponent.</p>
<p>4.05 Learn: Connection to Calculus: Inverse Functions 4.05 Graded Assignment</p>	0	0
<p>4.05 Quiz: Graphs of Logarithmic Functions 4.06 Applications of Logarithms 4.06 Learn: Exponential Decay Function 4.06 Learn: Logistic Growth</p>	0	<p>Use logarithms to solve exponential decay problems.</p> <p>Use logarithms to solve exponential growth problems.</p>
<p>4.06 Learn: Connection to Banking: Loans and Savings 4.06 Graded Assignment</p>	0	0
<p>4.06 Quiz: Applications of Logarithms 4.07 Exponential and Logarithmic Functions Wrap-Up 4.07 Discuss: What Questions Do You Have?</p>	0	<p>Identify and use the algebraic rules for exponents to simplify expressions.</p> <p>Draw or describe exponential functions and their graphs.</p> <p>Identify and describe the key characteristics of geometric sequences.</p> <p>Evaluate expressions using uncommon bases using the change-of-base formula.</p> <p>Describe how exponential functions and logarithmic functions are inverses of each other.</p> <p>Describe the graphical relationship between a function and its inverse.</p> <p>Describe how the graphs of logarithmic functions are translated horizontally and vertically.</p> <p>Use logarithms to solve an equation containing a variable exponent.</p>

		<p>Express repeated multiplication problems using exponents.</p> <p>Simplify expressions involving rational exponents.</p> <p>Determine the domain and range of exponential functions.</p> <p>Define geometric sequences.</p> <p>Convert between exponential and logarithmic expressions.</p> <p>Apply the rules of logarithms to rewrite expressions.</p> <p>Use logarithms to solve exponential decay problems.</p> <p>Use logarithms to solve exponential growth problems.</p> <p>Draw or describe the graph of radical functions.</p>
<p>4.07 Unit Review: Exponential and Logarithmic Functions</p> <p>4.07 Review: Calculator Skills</p> <p>4.07 Graded Assignment: Exponential and Logarithmic Functions</p>	0	0
Review for test	0	0
Review for test, cont'd	0	0
<p>4.07 Test, Part 1: Exponential and Logarithmic Functions</p> <p>4.07 Test, Part 2: Exponential and Logarithmic Functions</p>	<p>N.RN.1,2; N.NQ.2;</p> <p>A.SSE.1a, 2, 3c, 4;</p> <p>F.IF.3,7e, 8b; F.BF.1a,2,5;</p> <p>F.LE.1a,2,4,5</p>	0
<p>Unit 5: Conic Sections</p> <p>5.01 Introduction to Conic Sections</p> <p>5.01 Learn: How Do You Cut a Cone?</p>	0	<p>Describe how conic sections are formed by slicing a cone.</p> <p>Graph a circle using its equation.</p> <p>Write the equation of a circle.</p> <p>Identify real life applications of concepts of conic sections.</p>
<p>5.01 Learn: GPS Technology at Work</p> <p>5.01 Graded Assignment</p>	0	0

<p>5.01 Quiz: Introduction to Conic Sections                      5.02 Ellipses                      5.02 Learn: Stretching Circles</p>	0	<p>Define ellipse mathematically.</p> <p>Write the equation of an ellipse.</p> <p>Identify real life applications of concepts of conic sections.</p>
<p>5.02 Learn: Connection to History: Whispering about Kepler                      5.02 Graded Assignment</p>	0	0
<p>5.02 Quiz: Ellipses                      5.03 Hyperbolas                      5.03 Learn: Hyperbolas</p>	0	<p>Write the equation of a hyperbola.</p> <p>Define hyperbola mathematically.</p> <p>Identify real life applications of concepts of conic sections.</p>
<p>5.03 Learn: Connection to Science: Celestial Mechanics                      5.03 Graded Assignment</p>	0	0
<p>5.03 Quiz: Hyperbolas</p>	0	0
<p>5.04 Parabolas                      5.04 Learn: Parabolas</p>	0	<p>Define parabola mathematically.</p> <p>Write the equation of a parabola.</p> <p>Identify real life applications of concepts of conic sections.</p>
<p>5.04 Learn: Connection to Art: Parabolic Art                      5.04 Graded Assignment</p>	0	0
<p>5.04 Quiz: Parabolas</p>	0	0
<p>5.05 Systems of Conic Sections                      5.05 Learn: Finding the Intersections                      5.05 Learn: When Worlds Collide                      5.05 Graded Assignment</p>	0	<p>Compute points of intersections of two conic sections using algebra.</p>
<p>5.05 Quiz: Systems of Conic Sections                      5.06 Conic Sections Wrap-Up                      5.06 Discuss: What Questions Do You Have?</p>	0	<p>Write the equation of a circle.</p> <p>Write the equation of an ellipse.</p> <p>Write the equation of a hyperbola.</p> <p>Write the equation of a parabola.</p> <p>Compute points of intersections of two conic sections using algebra.</p> <p>Use graphic calculator to graph a function.</p>
<p>5.06 Unit Review: Conic Sections                      5.06 Review: Calculator Skills                      5.06 Graded Assignment: Conic Sections</p>	0	0
<p>Review for test</p>	0	0

Review for test, cont'd	0	0
5.06 Test, Part 1: Conic Sections 5.06 Test, Part 2: Conic Sections	A.REI.7, 11; G. CO. 1; G.GPE.1-3; G.GMD.4;	0
Unit 6: Semester Review 6.01 Semester Wrap-Up 6.01 Semester Review: Precalculus Semester 1 6.01 Discussion: Semester Wrap-Up	0	0
Review: Precalculus Semester 1, cont'd	0	0
Review: Precalculus Semester 1, cont'd	0	0
Review: Precalculus Semester 1, cont'd	0	0
Review: Precalculus Semester 1, cont'd	0	0
6.01 Exam: Semester Exam, Part 1 6.01 Exam: Semester Exam, Part 2	0	0
Unit 10: Honors Project 1 Lesson 1: Honors Project 1 Proposal		<p>Model problems using polynomial equations and solve them.</p> <p>Create labeled diagrams of three-dimensional solids.</p> <p>Write equations that represent the volumes of three-dimensional solids.</p> <p>Review the requirements for the project.</p>
Unit 10: Honors Project 1 Lesson 2: Honors Project 1 Outline		<p>Write polynomial functions to represent volumes and costs of three-dimensional solids.</p> <p>Draw and interpret graphs of polynomial functions.</p> <p>Model problems using polynomial equations and solve them.</p> <p>Interpret the graphs of polynomial functions.</p> <p>Write and solve a polynomial equation.</p> <p>Write and graph polynomial functions.</p>

<p>Unit 10: Honors Project 1 Lesson 3: Honors Project 1 Paper</p>		<p>Draw and interpret graphs of polynomial functions.</p> <p>Write constraints and an objective function to model profit.</p> <p>Determine a feasible profit region and find its minimum and maximum values.</p> <p>Use polynomial functions to make real-world recommendations.</p>
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