Amherst County Public Schools Curriculum and Pacing Guide

Subject __Pre AP Algebra Two _Trigonometry___ Nine Weeks ___1st_(43 days)____

Time Frame	Essential Understandings/Essential Knowledge and Skills	SOL	Strand
Chapter and Section 1.4 1.5 1.6	**The student will solve absolute value equations and inequalities algebraically and graphically,** • The definition of absolute value (for any real numbers a and b, where b $\geq$ 0, if $\lvert a \rvert = b$, then a = b or a = - b) is used in solving absolute value equations and inequalities. • Absolute value inequalities can be solved graphically or by using a compound statement. • Real-world problems can be interpreted, represented, and solved using equations and inequalities ***Solve absolute value equations and inequalities algebraically and graphically.*** ***Apply an appropriate equation to solve a real-world problem.***	AII.4a	**EQUATIONS AND INEQUALITIES ALGEBRA II**
Chapter and Section 2.6 2.7	**The student will recognize the general shape of the absolute value function.** • The graphs/equations for a family of functions can be determined using a transformational approach. • Transformations of graphs include translations, reflections, and dilations. • A parent graph is an anchor graph from which other graphs are derived with transformations. ***Recognize graphs of parent functions.*** ***Given the graph of a function, identify the parent function.*** ***Given the equation and using a transformational approach, graph a function.*** ***Given a transformation of a parent function, identify the graph of the transformed function.*** ***Given the graph of a function, identify the transformations that map the preimage to the image in order to determine the equation of the image.*** ***Using a transformational approach, write the equation of a function given its graph.***	AII.6	**FUNCTIONS**

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Chapter and Section 2.6 2.7	**The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** • A function can be described on an interval as increasing, decreasing, or constant. ***Identify the domain, range, zeros, and intercepts of a function presented algebraically or graphically.*** ***Describe restricted/discontinuous domains and ranges.*** ***Given the graph of a function, identify intervals on which the function is increasing and decreasing.***	All. 7a, 7c, 7d	**FUNCTIONS**
Chapter and Section 2.5	**The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions. <u>USE LINEAR MODELS</u>** • Data and scatterplots may indicate patterns that can be modeled with an algebraic equation. • Graphing calculators can be used to collect, organize, picture, and create an algebraic model of the data. ***Collect and analyze data.*** ***Investigate scatterplots to determine if patterns exist and then identify the patterns.*** ***Find an equation for the curve of best fit for data, using a graphing calculator. Models will include polynomial, exponential, and logarithmic functions. <u>LINEAR</u>*** ***Make predictions, using data, scatterplots, or the equation of the curve of best fit.***	All.9	**STATISTICS**
Chapter and Section 5.3 5.4	**The student, given polynomial expressions, will** **d) factor polynomials completely.** • The complete factorization of polynomials has occurred when each factor is a prime polynomial. • Pattern recognition can be used to determine complete factorization of a polynomial. ***Factor polynomials by applying general patterns including difference of squares, sum and difference of cubes, and perfect square trinomials.*** ***Factor polynomials completely over the integers***	All.1d	**EXPRESSIONS AND OPERATIONS** **Review adding, subtracting, multiplying monomials, binomials and trinomials.**

	Verify polynomial identities, including the difference of square, sum and difference of cubes and perfect square trinomials.		
Chapter and Section 5.5 5.6 5.7	**The student, given radical, expressions, will** **b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;** **c) write radical expressions as expressions containing rational exponents and vice versa; and** • Radical expressions can be written and simplified using rational exponents. • Only radicals with a common radicand and index can be added or subtracted. ***Simplify radical expressions containing positive rational numbers and variables.*** ***Convert from radical notation to exponential notation, and vice versa.*** ***Add and subtract radical expressions.*** ***Multiply and divide radical expressions not requiring rationalizing the denominators.***	AII.1b c	**EXPRESSIONS AND OPERATIONS**
Chapter and Section 5.8 5.9	**The student will perform operations on complex numbers, express the results in simplest form using patterns of the powers of *i*, and identify field properties that are valid for the complex numbers.** • Complex numbers are organized into a hierarchy of subsets. • A complex number multiplied by its conjugate is a real number. • Equations having no real number solutions may have solutions in the set of complex numbers. • Field properties apply to complex numbers as well as real numbers. • All complex numbers can be written in the form a+b*i* where *a* and *b* are real numbers and *i* is $\sqrt{-1}$. ***The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to*** ***Recognize that the square root of –1 is represented as i.***	AII.3	**EXPRESSIONS AND OPERATIONS**

	Determine which field properties apply to the complex number system. ***Simplify radical expressions containing negative rational numbers and express in a+bi form.*** ***Simplify powers of i.*** ***Add, subtract, and multiply complex numbers.*** ***Place the following sets of numbers in a hierarchy of subsets: complex, pure imaginary, real, rational, irrational, integers, whole, and natural.*** ***Write a real number in a+bi form.*** ***Write a pure imaginary number in a+bi form.***		
Chapter and Section 7.9	**The student will recognize the general shape of function (square root, cube root,) families and will convert between graphic and symbolic forms of functions.** • The graphs/equations for a family of functions can be determined using a transformational approach. • Transformations of graphs include translations, reflections, and dilations. • A parent graph is an anchor graph from which other graphs are derived with transformations. ***The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to recognize graphs of parent functions.*** ***Given a transformation of a parent function, identify the graph of the transformed function.*** ***Given the equation and using a transformational approach, graph a function.*** ***Given the graph of a function, identify the parent function.*** ***Given the graph of a function, identify the transformations that map the preimage to the image in order to determine the equation of the image.*** ***Using a transformational approach, write the equation of a function given its graph.***	AII.6	**FUNCTIONS**

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Subject _Pre AP Algebra Two_Trigonometry_____ Nine Weeks ___2nd__(41 days)_____

Time Frame	Essential Understandings/Essential Knowledge and Skills	SOL	Strand
Chapter and Section 6.1 6.2 6.3 6.4 6.5 5.8	**The student will solve, algebraically and graphically,** **b) quadratic equations over the set of complex numbers;** **d) equations containing radical expressions.** • A quadratic function whose graph does not intersect the *x*-axis has roots with imaginary components. • The quadratic formula can be used to solve any quadratic equation. • The value of the discriminant of a quadratic equation can be used to describe the number of real and complex solutions. • The process of solving radical or rational equations can lead to extraneous solutions. • Equations can be solved in a variety of ways. ***Solve a quadratic equation over the set of complex numbers using an appropriate strategy.*** ***Calculate the discriminant of a quadratic equation to determine the number of real and complex solutions.*** ***Recognize that the quadratic formula can be derived by applying the completion of squares to any quadratic equation in standard form.*** ***Solve an equation containing a radical expression algebraically and graphically.*** ***Verify possible solutions to an equation containing rational or radical expressions.*** ***Apply an appropriate equation to solve a real-world problem.***	AII.4b, 4d	**EQUATIONS AND INEQUALITIES**
	The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions. USE QUADRATIC MODEL. • Data and scatterplots may indicate patterns that can be modeled with an algebraic equation. • Graphing calculators can be used to collect, organize, picture, and create an algebraic model of the data.	AII.9	**STATISTICS**

	Collect and analyze data. ***Investigate scatterplots to determine if patterns exist and then identify the patterns.*** ***Find an equation for the curve of best fit for data, using a graphing calculator. Models will include polynomial, exponential, and logarithmic functions.*** ***Make predictions, using data, scatterplots, or the equation of the curve of best fit.***		
Chapter and Section (8.2 – 8.6) 8.7	**The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically**. • Solutions of a nonlinear system of equations are numerical values that satisfy every equation in the system. • The coordinates of points of intersection in any system of equations are solutions to the system. • Real-world problems can be interpreted, represented, and solved using systems of equations ***Predict the number of solutions to a nonlinear system of two equations.*** ***Solve a linear-quadratic system of two equations algebraically and graphically.*** ***Solve a quadratic-quadratic system of two equations algebraically and graphically.***	**AII.5**	**EQUATIONS AND INEQUALITIES**
Chapter and Section 7.1 7.2 7.5	**The student will recognize the general shape of polynomial function and will convert between graphic and symbolic forms of functions. USE QUADRATIC, CUBIC, QUARTIC** ***Recognize graphs of parent functions.*** ***Given a transformation of a parent function, identify the graph of the transformed function.*** ***Given the equation and using a transformational approach, graph a function.*** ***Given the graph of a function, identify the parent function.*** ***Given the graph of a function, identify the transformations that map the preimage to the image in order to determine the equation of the image.*** ***Using a transformational approach, write the equation of a function given its graph.***	**AII.6**	**FUNCTIONS**
	The student will investigate and analyze functions algebraically and graphically. Key concepts include **a) domain and range, including limited and discontinuous domains and ranges;**	**AII.7a, 7b, 7c,**	**FUNCTIONS**

Chapter and Section 7.1 7.2 7.5 7.7 7.8	**b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions** • Functions may be used to model real-world situations. • The domain and range of a function may be restricted algebraically or by the real-world situation modeled by the function. • A function can be described on an interval as increasing, decreasing, or constant. • End behavior describes a function as *x* approaches positive and negative infinity. • A zero of a function is a value of *x* that makes $f(x)$ equal zero. • If (*a*, *b*) is an element of a function, then (*b*, *a*) is an element of the inverse of the function. • Functions can be combined using composition of functions. ***Identify the domain, range, zeros, and intercepts of a function presented algebraically or graphically.*** ***Describe restricted/discontinuous domains and ranges.*** ***Given the graph of a function, identify intervals on which the function is increasing and decreasing.*** ***Describe the end behavior of a function.*** ***Find the inverse of a function.*** ***Graph the inverse of a function as a reflection across the line y = x.*** ***Find the composition of two functions.*** ***Use the composition of functions to verify two functions are inverses.***	**7d, 7f, 7g, 7h**	
Chapter and Section	**The student will investigate and describe the relationships among solutions of an equation, zeros of a function, *x*-intercepts of a graph, and factors of a polynomial expression.**	**AII.8**	FUNCTIONS

Chapter and Section 7.1 7.2 7.5	• The *Fundamental Theorem of Algebra* states that, including complex and repeated solutions, an n^{th} degree polynomial equation has exactly n roots (solutions). • The following statements are equivalent: – k is a zero of the polynomial function f; – $(x - k)$ is a factor of $f(x)$; – k is a solution of the polynomial equation $f(x) = 0$; and – k is an x-intercept for the graph of $y = f(x)$. ***Describe the relationships among solutions of an equation, zeros of a function, x-intercepts of a graph, and factors of a polynomial expression.*** ***Define a polynomial function, given its zeros.*** ***Determine a factored form of a polynomial expression from the x-intercepts of the graph of its corresponding function.*** ***For a function, identify zeros of multiplicity greater than 1 and describe the effect of those zeros on the graph of the function.*** ***Given a polynomial equation, determine the number of real solutions and non-real solutions.***		

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Subject _Pre AP Algebra Two Trigonometry__ Nine Weeks ___3rd__(49 days)_____

Time Frame	Essential Understandings/Essential Knowledge and Skills	SOL	Strand
Chapter and Section 9.1 9.2	**The student, given rational expressions, will** **a) add, subtract, multiply, divide, and simplify rational algebraic expressions;** • Computational skills applicable to numerical fractions also apply to rational expressions involving variables. • A relationship exists among arithmetic complex fractions, algebraic complex fractions, and rational numbers. ***Simplify a rational algebraic expression with common monomial or binomial factors.*** ***Recognize a complex algebraic fraction, and simplify it as a quotient or product of simple algebraic fractions.*** ***Add, subtract, multiply, and divide rational algebraic expressions*.**	**AII.1a**	**EXPRESSIONS AND OPERATIONS**
Chapter and Section 9.3 9.6	**The student will solve, algebraically and graphically,** **c) equations containing rational algebraic expressions; and** • The process of solving rational equations can lead to extraneous solutions. • Set builder notation may be used to represent solution sets of equations and inequalities. ***Solve equations containing rational algebraic expressions with monomial or binomial denominators algebraically and graphically.*** ***Verify possible solutions to an equation containing rational or radical expressions.*** ***Apply an appropriate equation to solve a real-world problem*.**	**AII.4c**	**EQUATIONS AND INEQUALITIES**
Chapter and Section 9.4	**The student will identify, create, and solve real-world problems involving inverse variation, joint variation, and a combination of direct and inverse variations.** • Real-world problems can be modeled and solved by using inverse variation, joint variation, and a combination of direct and inverse variations. • Joint variation is a combination of direct variations. ***Translate "y varies jointly as x and z" as y = kxz.*** ***Translate "y is directly proportional to x" as y = kx.***	**AII.10**	**STATISTICS**

	Translate "y is inversely proportional to x" as $y = \frac{k}{x}$. ***Given a situation, determine the value of the constant of proportionality.*** ***Set up and solve problems, including real-world problems, involving inverse variation, joint variation, and a combination of direct and inverse variations.***		
Chapter and Section 9.5	**The student will recognize the general shape of function (rational,) and will convert between graphic and symbolic forms of functions.** ***Recognize graphs of parent functions.*** ***Given a transformation of a parent function, identify the graph of the transformed function.*** ***Given the equation and using a transformational approach, graph a function.*** ***Given the graph of a function, identify the parent function.*** ***Given the graph of a function, identify the transformations that map the preimage to the image in order to determine the equation of the image.*** ***Using a transformational approach, write the equation of a function given its graph.***	**AII.6**	**FUNCTIONS**
Chapter and Section 9.3	**The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** • Functions may be used to model real-world situations. • The domain and range of a function may be restricted algebraically or by the real-world situation modeled by the function. • A function can be described on an interval as increasing, decreasing, or constant.	**AII.7a, 7b, 7c, 7d, 7e, 7f**	**FUNCTIONS**

	• Asymptotes may describe both local and global behavior of functions. • End behavior describes a function as *x* approaches positive and negative infinity. • A zero of a function is a value of *x* that makes $f(x)$ equal zero. ***Identify the domain, range, zeros, and intercepts of a function presented algebraically or graphically.*** ***Describe restricted/discontinuous domains and ranges.*** ***Given the graph of a function, identify intervals on which the function is increasing and decreasing.*** ***Find the equations of vertical and horizontal asymptotes of functions.*** ***Describe the end behavior of a function.***		
Chapter and Section 2.6 10.1 10.2	**The student will recognize the general shape of function (exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions.** ***Recognize graphs of parent functions.*** ***Given a transformation of a parent function, identify the graph of the transformed function.*** ***Given the equation and using a transformational approach, graph a function.*** ***Given the graph of a function, identify the parent function.*** ***Given the graph of a function, identify the transformations that map the preimage to the image in order to determine the equation of the image.*** ***Using a transformational approach, write the equation of a function given its graph.***	**AII.6**	**FUNCTIONS**
Chapter and Section 10.1 10.2 10.3 10.4	**The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and**	**AII.7a, 7b, 7c, 7d, 7e, 7f, 7g**	**FUNCTIONS**

10.5	• Functions may be used to model real-world situations. • The domain and range of a function may be restricted algebraically or by the real-world situation modeled by the function. • A function can be described on an interval as increasing, decreasing, or constant. • Asymptotes may describe both local and global behavior of functions. • End behavior describes a function as *x* approaches positive and negative infinity. • A zero of a function is a value of *x* that makes $f(x)$ equal zero. • If (*a*, *b*) is an element of a function, then (*b*, *a*) is an element of the inverse of the function. • Exponential ($y = a^x$) and logarithmic ($y = \log_a x$) functions are inverses of each other. ***Identify the domain, range, zeros, and intercepts of a function presented algebraically or graphically.*** ***Describe restricted/discontinuous domains and ranges.*** ***Given the graph of a function, identify intervals on which the function is increasing and decreasing.*** ***Find the equations of vertical and horizontal asymptotes of functions.*** ***Describe the end behavior of a function.*** ***Find the inverse of a function.*** ***Graph the inverse of a function as a reflection across the line y = x.*** ***Investigate exponential and logarithmic functions, using the graphing calculator.*** ***Convert between logarithmic and exponential forms of an equation with bases consisting of natural numbers.***		
	The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve real-world problems, including writing the first *n* terms, finding the n^{th} term, and evaluating summation formulas.	**AII.2**	**FUNCTIONS**

Chapter and Section 11.1 11.2 11.3 11.4 11.5 11.6	• Sequences and series arise from real-world situations. • The study of sequences and series is an application of the investigation of patterns. • A sequence is a function whose domain is the set of natural numbers. • Sequences can be defined explicitly and recursively. ***Distinguish between a sequence and a series.*** ***Generalize patterns in a sequence using explicit and recursive formulas.*** ***Use and interpret the notations $\sum$, n, n^{th} term, and a_n.*** ***Given the formula, find a_n (the n^{th} term) for an arithmetic or a geometric sequence.*** ***Given formulas, write the first n terms and find the sum, S_n, of the first n terms of an arithmetic or geometric series.*** ***Given the formula, find the sum of a convergent infinite series.*** ***Model real-world situations using sequences and series.***		
Chapter and Section 11.3 11.4 11.6	**The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions. .** • Data and scatterplots may indicate patterns that can be modeled with an algebraic equation. • Graphing calculators can be used to collect, organize, picture, and create an algebraic model of the data. ***Collect and analyze data.*** ***Investigate scatterplots to determine if patterns exist and then identify the patterns.*** ***Find an equation for the curve of best fit for data, using a graphing calculator. Models will include polynomial, exponential, and logarithmic functions.*** ***Make predictions, using data, scatterplots, or the equation of the curve of best fit.***	AII.9	**STATISTICS**

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Subject _Pre Algebra Two Trigonometry_____ Nine Weeks ___4th__(41 days)_____

Time Frame	Essential Understandings/Essential Knowledge and Skills	SOL	Strand
Chapter and Section 12.3 12.4 12.5 12.6 12.7	**The student will identify properties of a normal distribution and apply those properties to determine probabilities associated with areas under the standard normal curve.** • A normal distribution curve is a symmetrical, bell-shaped curve defined by the mean and the standard deviation of a data set. The mean is located on the line of symmetry of the curve. • Areas under the curve represent probabilities associated with continuous distributions. • The normal curve is a probability distribution and the total area under the curve is 1. • For a normal distribution, approximately 68 percent of the data fall within one standard deviation of the mean, approximately 95 percent of the data fall within two standard deviations of the mean, and approximately 99.7 percent of the data fall within three standard deviations of the mean. • The mean of the data in a standard normal distribution is 0 and the standard deviation is 1. • The standard normal curve allows for the comparison of data from different normal distributions. • A z-score is a measure of position derived from the mean and standard deviation of data. • A z-score expresses, in standard deviation units, how far an element falls from the mean of the data set. • A z-score is a derived score from a given normal distribution. • A standard normal distribution is the set of all z-scores. **Identify the properties of a normal probability distribution.** **Describe how the standard deviation and the mean affect the graph of the normal distribution.** **Compare two sets of normally distributed data using a standard normal distribution and z-scores.** **Represent probability as area under the curve of a standard normal probability distribution.** **Use the graphing calculator or a standard normal probability table to determine probabilities or percentiles**	**AII.11**	**STATISTICS**

	based on z-scores.		
Chapter and Section 12.1 12.2	**The student will compute and distinguish between permutations and combinations and use technology for applications.** • The *Fundamental Counting Principle* states that if one decision can be made *n* ways and another can be made *m* ways, then the two decisions can be made *nm* ways. • *Permutations* are used to calculate the number of possible arrangements of objects. • *Combinations* are used to calculate the number of possible selections of objects without regard to the order selected ***Compare and contrast permutations and combinations.*** ***Calculate the number of permutations of n objects taken r at a time.*** ***Calculate the number of combinations of n objects taken r at a time.*** ***Use permutations and combinations as counting techniques to solve real-world problems.***	**AII.12**	**STATISTICS**
	Review by Strand **Expressions and Operations** **Equations and Inequalities** **Functions** **Statistics**		
Chapter and Section 13-1	**The student will find, with the aid of a calculator, the value of any trigonometric function and inverse trigonometric function.** • **The trigonometric function values of any angle can be found by using a calculator.** • **The inverse trigonometric functions can be used to find angle measures whose trigonometric function values are known.** • **Calculations of inverse trigonometric function values can be related to the triangular definitions of the trigonometric functions.** Use a calculator to find the trigonometric function values of any angle in either degrees or radians.	**AII/T.16**	

	Define inverse trigonometric functions. Find angle measures by using the inverse trigonometric functions when the trigonometric function values are given.		
Chapter and Section 13-1 13-2	**The student will find, without the aid of a calculator, the values of the trigonometric functions of the special angles and their related angles as found in the unit circle. This will include converting angle measures from radians to degrees and vice versa.** • Special angles are widely used in mathematics. • Unit circle properties will allow special angle and related angle trigonometric values to be found without the aid of a calculator. • Degrees and radians are units of angle measure. • A radian is the measure of the central angle that is determined by an arc whose length is the same as the radius of the circle. Find trigonometric function values of special angles and their related angles in both degrees and radians. Apply the properties of the unit circle without using a calculator. Use a conversion factor to convert from radians to degrees and vice versa without using a calculator.	**AII/T.15**	
Chapter and Section 13-3	**The student, given the value of one trigonometric function, will find the values of the other trigonometric functions, using the definitions and properties of the trigonometric functions.** • If one trigonometric function value is known, then a triangle can be formed to use in finding the other five trigonometric function values. • Knowledge of the unit circle is a useful tool for finding all six trigonometric values for special angles. Given one trigonometric function value, find the other five trigonometric function values. Develop the unit circle, using both degrees and radians. Solve problems, using the circular function definitions and the properties of the unit circle. Recognize the connections between the coordinates of points on a unit circle and coordinate geometry; cosine and sine values; and lengths of sides of special right triangles (30°-60°-90° and 45°-45°-90°).	**AII/T.14**	

Chapter and Section 13-3	**The student, given a point other than the origin on the terminal side of the angle, will use the definitions of the six trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of the angle in standard position. Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.** • Triangular trigonometric function definitions are related to circular trigonometric function definitions. • Both degrees and radians are units for measuring angles. • Drawing an angle in standard position will force the terminal side to lie in a specific quadrant. • A point on the terminal side of an angle determines a reference triangle from which the values of the six trigonometric functions may be derived. Define the six triangular trigonometric functions of an angle in a right triangle. Define the six circular trigonometric functions of an angle in standard position. Make the connection between the triangular and circular trigonometric functions. Recognize and draw an angle in standard position. Show how a point on the terminal side of an angle determines a reference triangle.	**AII/T.13**	
Chapter and Section 13-4 13-5	**The student will identify, create, and solve real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.** • **A real-world problem may be solved by using one of a variety of techniques associated with triangles.** Write a real-world problem involving triangles. Solve real-world problems involving triangles. Use the trigonometric functions, Pythagorean Theorem, Law of Sines, and Law of Cosines to solve real-world problems.	**AII/T.21**	

	Use the trigonometric functions to model real-world situations. Identify a solution technique that could be used with a given problem.		

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RESOURCES

SOL Released Tests

http://www.doe.virginia.gov/testing/sol/standards_docs/mathematics/index.shtml

Dept of Education Math Resources – SOL, Curriculum Framework, Enhanced Scope and Sequence, Blueprints, Released Tests

http://www.doe.virginia.gov/testing/sol/standards_docs/mathematics/index.shtml

JLAB

http://education.jlab.org/solquiz/index.html

SOL Powerpoints

http://web.dps.k12.va.us/Departments/Instruction/SOL%20PowerPoints/sol_released_tests_in_power_poin.htm

Glencoe

http://www.glencoe.com/sites/common_assets/workbooks/math/Algebra2VA/a2vasol2.pdf

http://www.glencoe.com/sites/virginia/support_teacher/state_resources/pdflink.php

http://www.glencoe.com/sites/virginia/teacher/mathematics/assets/math_review.html

http://www.glencoe.com/sites/virginia/teacher/mathematics/assets/pow.html

http://www.glencoe.com/sec/math/algebra/algebra1/algebra1_05/study_guide/pdfs/alg1_pssg_G108.pdf

Henrico Algebra 2

http://teachers.henrico.k12.va.us/math/hcpsalgebra2/modules.html

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Regents

http://www.jmap.org/JMAP_RESOURCES_BY_TOPIC.htm#IA

http://www.regentsprep.org/Regents/math/algtrig/math-algtrig.htm#m2

http://www.regentsprep.org/Regents/math/algtrig/ATS2/NormalPrac.htm

http://www.regentsprep.org/Regents/math/algtrig/ATS2/indexATS2.htm

http://www.regentsprep.org/Regents/math/algtrig/ATS5/PCPrac.htm

http://itech.pjc.edu/kmerritt/

http://www.crctlessons.com/math-benchmark-tests.html

http://www.mathpower.com/algebraquiz.htm

http://lhs.lexingtonma.org/Dept/Math/exams/

http://www.achieve.org/files/ADPAlgebraIPracticeTestSpring2009.pdf

Prentice Hall

http://www.phschool.com/webcodes10/index.cfm?fuseaction=home.gotoWebCode&wcprefix=bfk&wcsuffix=0099

http://www.phschool.com/webcodes10/index.cfm?fuseaction=home.gotoWebCode&wcprefix=ajk&wcsuffix=0099

http://www.paly.net/~sfriedla/algebratwo/index.html

http://www.wcs.k12.va.us/users/honaker/math-resources.html

http://www.thefutureschannel.com/algebra/algebra_real_world_movies.php

http://www.math.usu.edu/~schneit/CTIS/SD/

http://www.chaoticgolf.com/vodcasts.html

Equation Match

http://www.bbc.co.uk/education/mathsfile/shockwave/games/equationmatch.html

Solving Equations Practice (Linear, Quadratic)

http://www.staff.vu.edu.au/mcaonline/java/index.html

Many Math Powerpoints

http://math.pppst.com/

http://math.pppst.com/radical-expressions.html

Jim Reed's Homepage (Algebra)

http://staff.argyll.epsb.ca/jreed/

Math Interactives

http://www.learnalberta.ca/content/mejhm/index.html?l=0

Worksheet Generator

http://www.lessoncorner.com/worksheets

Free Math Videos

http://neaportal.k12.ar.us/

http://www.paly.net/~sfriedla/algebraone/index.html