HONORS PRECALCULUS 1st SEMESTER OBJECTIVES

Chapter	Objective	Standard/Benchmark
7.1	~Convert degree measurement to radians	4.4
	~Convert radian measurement to degrees	4.4
	~Use the radian measurement definition to find radius, arc length or angle	4.4
	~Find co terminal angles	4.4
	~Solve problems involving RPM's	4.1
7.3	~Find the sine and cosine of a quadrantal angle without a calculator	7.3
	~Name the proper quadrant given sine and cosine conditions	7.1
	~Find the angle or angles who have the given sine or cosine	7.3
	~Determine whether the given sine or cosine of an angle is +, - or 0	7.3
	~Find the sine and cosine of the angle that goes through a given point	7.3
	~Find the cosine of an angle given the sine and the quadrant the angle is in.	7.3
	~Find the sine of an angle given the cosine and the quadrant the angle is in	7.3
	~Compare sines and cosines of angles	7.3
7.4	~Express the sine or cosine of an angle in terms of a reference angle	7.3
	~Find the value of the sine or cosine using a calculator	7.3
	~Give the exact value of a sine or cosine expression	7.3
	~Graph the sine and cosine curves	7.4
7.5	~Express the given trig expression, all 6 trig functions, in terms of a reference angle	7.3
	~Find the value of all 6 trig functions using a calculator	7.3
	~Find the angle or angles who have the given trig value	7.3
	~Find the values of the 5 trig functions given one trig value and the quadrant of the angle	7.3
	~Find the exact value of all 6 trig functions	7.3
	~Graph the csc, sec, tan, and cot	7.3
7.6	~Use a calculator to find the given inverse trig values	1.3
	~Find the angle who fits the given inverse trig function	7.3
	~Find the value of an expression involving both trig and inverse trig functions	7.3
7.2	~Solve problems involving sectors of circles; area, arc length, radius, central angle	4.1
	~Solve problems involving apparent size	4.1
	~Apply the sector formulas to solve real world problems	4.1
8.1	~Find the solutions to trigonometric equations graphically with a TI-85	1.3,7.4
	~Find the solutions to trigonometric equations algebraically	1.3,7.4
8.2	~Find the amplitude and period of a trig equation	6.4,7.3
	~Find the amplitude and period of the graph of a trig function	6.4,7.3
	~Sketch the graph of a given trig function	6.4,7.4
	~Find the solutions to trigonometric equations with a TI-85	6.4,7.4
8.3	~Find the equation for a given trigonometric graph	6.4
	~Find the amplitude, period, h, and k from a given trig equation	7.3
	~Solve problems involving trig modeling	7.3
8.4	~Simplify trigonometric expressions	7.3
	~Prove trigonometric identities	7.3
8.5	~Use trigonometric identities to solve more difficult trigonometric equations	7.3
	~Use the TI-85 to solve more difficult trigonometric equations	7.3
9.1	~Find all 3 angles and all 3 sides of a right triangle using the right triangle trig rules	4.1
	~Use right triangle trigonometry to solve real world problems	4.1
9.2	~Find the area of a triangle using the sine definition	4.1,5.2
	~Find the area of a quadrilateral	4.1,5.2
9.3	~Find all 3 angles and all 3 sides of a triangle using the Law of Sines	7.3
	~Use the Law of Sines to solve real world problems	4.1
9.4	~Find all 3 angles and all 3 sides of a triangle using the Law of Cosines	7.3
	~Find the area of a quadrilateral	4.1,5.2
	~Use the Law of Cosines to solve real world problems	4.1
9.5	~Use trigonometry to solve navigation and surveying problems	4.1
10.1	~Simplify a given expression using the sum and difference formulas for sine and cosine	7.3
	~Prove trigonometric identities using the sum and difference formulas for sine and cosine	7.3

Section	Skill	Ref.
	~Find the exact value of the given trig function using the sum and difference formulas	7.3
	~Find the sine or cosine of the sum or difference of 2 angles from given information	7.3
10.2	~Simplify an expression using the tangent sum and difference formulas	7.3
	~Find the exact value of a trig function using the tangent sum and difference formulas	7.3
	~Find the sine, cosine, tangent, or cotangent sum or difference of 2 angles	7.3
10.3	~Simplify an expression using the double and half-angle formulas	7.3
	~Find the exact value of a trig function using the double or half-angle formulas	7.3
	~Find the double or half-angle trig values from given information	7.3
10.4	~Use the TI-85 to solve more difficult trigonometric equations	7.3
11.1	~Plot points in polar coordinates	6.4
	~Find other pairs of polar coordinates for the same point	4.4
	~Convert cartesian coordinates to polar	4.4
	~Convert polar coordinates to cartesian	4.4
	~Graph a polar equation on polar graph paper	6.4
	~Sketch the graph of a polar equation using the TI-85	6.4,7.4
	~Convert a polar equation to rectangular	7.3
18.1	~Find the equation of the least squares line using the TI-85	6.4
	~Make forecasts using the least squares line	6.4
	~Find the correlation coefficient and interpret its meaning	6.4
18.2	~Fit an exponential curve to a data set using the TI-85	6.4
	~Make forecasts using the exponential equation	6.4
	~Find the correlation coefficient and interpret its meaning	6.4
18.3	~Fit a power curve to a data set using the TI-85	6.4
	~Make forecasts using the power curve	6.4
	~Find the correlation coefficient and interpret its meaning	6.4
18.4	~Choose the best fit model of a given data set	6.4
	~Make forecasts using the best fit model	6.4
1.1	~Find the distance between 2 points	7.1
	~Find the midpoint of the segment connecting 2 points	7.1
	~Determine if a given point is on the given line	7.1
	~Find the intersection of 2 lines using:	7.2
	1) Substitution	7.1
	2) Linear Combination	7.1
	3) Using the TI-85	7.1
	~Sketch the graph of a line	7.4
1.2	~Find the slope of the line joining 2 points	7.1
	~Find the slope and y-intercept given the equation of a line	7.1
	~Determine if 2 lines are parallel or perpendicular	7.1
1.3	~Find the equation of a line in general form using the point-slope, slope-intercept,	7.1
	or intercept formulas given:	7.1
	1) Slope and y-intercept/point on the line	7.1
	2) Two points on the line	7.1
	3) x & y intercepts	7.1
	4) horizontal or vertical lines through a point	7.1
	~Find the equation of a line that is parallel or perpendicular to a given line	7.1
	and passing through a given point	7.1
1.5	~Define the imaginary number, i	2.1
	~Simplify square roots of negative numbers	2.1
	~Add, subtract, multiply, and divide with imaginary numbers	2.1
	~Recognize and apply the characteristics of the powers of i.	2.1
1.6	~State the quadratic formula	7.2
	~Solve quadratic equations by using the following methods:	7.2
	1) Factoring	7.2
	2) Completing the square	7.2
	3) Quadratic formula	7.2
	4) TI-85	7.2
	~Solve equations involving fractions	7.2
	~Solve equations involving square roots	7.2

Chapter	Objective							Standard/Benchmark
	HONORS PRECALCULUS 2nd SEMESTER OBJECTIVES							
Chapter	Objective							Standard/Benchmark
2.1	~Determine whether a function is a polynomial function							7.1
	~Find the values of functions given various inputs							7.1
	~Use synthetic substitution to find the value of a function							7.1
	~Add and subtract functions							7.1
2.2	~Use synthetic division to find the quotient and remainder when dividing polynomials							7.2
	~Determine whether (x-a) is a factor of a polynomial							7.2
	~Given one or more roots of a polynomial, find the remaining roots							7.2
2.3	~Sketch the graph of a polynomial							7.4
	~Factor polynomials							7.2
	~Find the equation of the polynomial, given its graph							7.4
2.5	~Use the TI-85 to find the solutions to polynomials							1.3,7.4
2.6	~Solve a cubic equation by regrouping and factoring							7.2
	~Solve a quartic equation that is in a quadratic form							7.2
	~Use the rational root theorem to determine the possible rational roots of a polynomial							7.3
3.1	~Solve linear inequalities and graph its solution on a number line							7.1
	~Solve inequalities involving absolute values and graph its solution on a number line							7.1
3.2	~Solve polynomial inequalities by factoring and graphing							7.1
	~Solve polynomial inequalities using the TI-85							1.3,7.4
3.3	~Solve inequalities in 2 variables and graph the solution							7.4
5.1	~Simplify expressions using the laws of exponents							2.2
5.2	~Simplify expressions involving fractional exponents							2.2
	~Solve equations involving exponents							2.2
5.3	~Solve problems that use exponential functions involving half-life, doubling/tripling money,							2.2
	population growth, and annual rate of increase							2.2
	~Use the Rule of 72							4.1
5.4	~Understand the development of the number 'e'							7.3
	~Solve compounded interest problems							4.1
5.5	~Understand the relationship between exponential and logarithmic equations							2.2
	~Rewrite logarithmic equations as exponential equations and vice versa to solve							2.2
	~Find the logarithm of a number							2.2
	~Understand the base of a logarithm							2.2
	~Solve equations involving logarithms							2.2
5.6	~Use the laws of logarithms to write and expression as a single logarithm							2.2
	~Simplify expressions involving logarithms and exponents							2.2
	~Solve a logarithmic equation for y							2.2
	~Solve equations involving logarithms							2.2
5.7	~Solve problems using the logarithmic change of base formula							2.2
	~Solve problems by using powers of the same number							2.2
14.1	~Add and subtract matrixes							7.3
	~Transpose a matrix							7.3
	~Multiply a matrix by a scalar							7.3
	~Give the dimensions of a matrix							7.3
	~Write a data set in matrix form and use to solve problems							7.3
14.2	~Understand the rules of multiplying matrixes							7.3
	~Multiply matrixes together							7.3
	~Solve problems involving multiplying matrixes							7.3
14.3	~Find the inverse of a 2 x 2 matrix							7.3
	~Use the TI-85 to find the inverse of other square matrixes							1.3
	~Solve matrix equations using inverses and also the TI-85							1.3
14.4	~Write a communication matrix from a given network							1.1
	~Draw a communication network from a communication matrix							1.1
12.7	~Evaluate 2 x 2, 3 x 3, and 4 x 4 determinants							7.3
12.8	~Use Cramer's Rule to solve systems of equations							7.3
	~Understand the meaning of 2 x 2 and 3 x 3 determinants							7.3

19.1	~Understand the concept of limit of a function					7.3
	~Solve problems involving limits					7.3
19.2	~Sketch the graph of a function without a graphing calculator					7.4
20.1	~Understand the definition of the derivative of a function					7.3
	~Find the derivative of a function					7.3
20.2	~Find the maximum and minimum points of a function using derivatives					7.4
20.3	~Solve application problems involving maximum and minimum values					7.4
20.4	~Solve velocity and acceleration problems					6.4,7.4