Curriculum Map

Subject: Common Core 2 Year Algebra Math 9S

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Unit #1 – The Building Blocks	Unit #3-Functions	Unit #5 – Systems of Linear	Unit #7- Polynomials
of Algebra	Introduction to	Equations and Inequalities	Intro to Polynomials
Rates, Patterns and	Functions	Solutions to Systems	Multiplying Polynomials
Problem Solving	Function Notation	and Solving by	Factoring Polynomials
Variables and	Graphs of Functions	Graphing	Factoring Based on
Expressions	Graphical Features	Solving Systems by	Conjugate Pairs
The Commutative and	 Exploring Functions 	Substitution	Factoring Trinomials
Associative Properties	Using the Graphing	Properties of	
The Distributive	Calculator	Systems and Their	Square Roots
Property	Average Rate of	Solutions	Simplifying Square roots
Equivalent Expressions	Change	The Elimination	Unit #10–
Seeing Structure in	The Domain and Range	Method	Graphical Displays of
Expressions	of a Function	Modeling with	Data
Exponents as Repeated		Systems of Equations	Quartiles and Box Plots
Multiplication	Unit #4 – Linear Functions	Solving Equations	Measures of Central
More Complex	Proportional	Graphically	Tendency
Equivalency	Relationships	Solving Systems of	
 Structure Work 	Unit Conversions	Inequalities	
Translating English to	Non-proportional	Modeling with	Regents review
Algebra	Linear Relationships	Systems of	
Algebraic Puzzles	Graphing Linear	Inequalities	
	Functions (Lines)		
	Writing Equations in	Unit #6 – Exponents	
	Slope-Intercept Form	Simplifying	
		Exponents	
		Zero and Negative	
		Exponents	
		 Exponential Growth 	
		Intro to Exponential	
Unit #2 – Linear Expressions,	Slope	Functions	

Equat	ions and Inequalities			Percent Review	
\checkmark	Equations and Their	\succ	Finding slope from a	Percent Increase and	
	Solutions		graph	Decrease	
\succ	Seeing Structure to	\succ	Finding slope from two		
	Solve Equations		points		
\succ	A Linear Equation	\succ	Finding equation of	Quarterly Review	
	Solving Review		slope	Quarterly Test	
\succ	Justifying Steps in	\succ	Graphing lines using		
	Solving an Equation		slope intercept		
\succ	Linear Word Problems	\succ	Graphing lines using		
\succ	Linear Equations and		standard form		
	Consecutive Integer	\succ	Writing linear		
	Games.		Equations		
\succ	Solving Linear				
	Equations with	Quarte	erly Review		
	Unspecified Constants	Quarte	erly Test		
\succ	Inequalities				
\succ	Solving Linear				
	Inequalities				
	Compound Inequalities				
	Interval Notation				
\succ	Modeling with				
	Inequalities				
Quart	erly Review				
Quart	erly Test				

Curriculum Map

Subject: Common Core Two Year Algebra Math 10S Second

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Unit #1 – The Building Blocks	Unit #4 – Linear Functions	Unit #6 – Exponents	Unit #9- Roots and Irrational
of Algebra Review all	and Arithmetic Sequences	Review Lessons 1-6 with	Numbers
lessons with Supplemental	Review Lessons 1-5 with	Supplemental Worksheets	Square Roots
Worksheets	Supplemental Worksheets	Simplifying	Irrational Numbers
Rates, Patterns and	Proportional	Expressions	Square Root Functions
Problem Solving	Relationships	Involving Exponents	and Shifting
Variables and	Unit Conversions	Zero and Negative	Solving Quadratics Using
Expressions	Non-proportional	Exponents	Inverse Operations
The Commutative and	Linear Relationships	 Exponential Growth 	Finding Zeroes by
Associative Properties	Graphing Linear	Intro to Exponential	Completing the Square
The Distributive	Functions (Lines)	Functions	The Quadratic Formula
Property	 Writing Equations in 	Percent Review	Cube Roots
Equivalent Expressions	Slope-Intercept Form	Percent Increase and	Unit #10– Exponents
Seeing Structure in	Unit 4 Lessons 6-13	Decrease	Graphical Displays of
Expressions	Modeling with Linear	Lessons 7-9	Data
Exponents as Repeated	Functions	Exponential Models	Quartiles and Box Plots
Multiplication	Linear Modeling	Based on Percent	Measures of Central
More Complex	Strange Lines- Vertical	Growth	Tendency
Equivalency	and Horizontal	Linear versus	Variation within a Data
 Structure Work 	Absolute Value and	Exponential	Set
Translating English to	Step Functions	Geometric Sequences	Two Way Frequency
Algebra	The Truth about	Unit #7- Polynomials	Tables
Algebraic Puzzles	Graphs	Review Lessons 1-4 with	Bivariate Data Analysis
Unit #2 – Linear Expressions,	Graphs of Linear	Supplemental Worksheets	Linear Regression on the
Equations and Inequalities	Inequalities	Intro to Polynomials	Calculator
Review all lessons with	Introduction to	Multiplying	Other Types of
Supplemental Worksheets	Sequences	Polynomials	Regression
Equations and Their	Arithmetic Sequences	Factoring	Quantifying
Solutions		Polynomials	Predictability
Seeing Structure to	Unit #5 – Systems of Linear	Factoring Based on	Residuals

Solve Equations	Equations and Inequalities	Conjugate Pairs	Unit #11- Functions and
A Linear Equation	Solutions to Systems	Lessons 5 and 6	Modeling
Solving Review	and Solving by	Factoring Trinomials	Function
Justifying Steps in	Graphing	More Factoring	Transformations
Solving an Equation	Solving Systems by	Unit #8- Quadratic	 Horizontal Stretching of
Linear Word Problems	Substitution	Functions and Their	Functions
Linear Equations and	Properties of Systems	Algebra	Discrete Functions
Consecutive Integer	and Their Solutions	Intro to Quadratic	Linear and Exponential
Games.	The Elimination	Functions	Models
Solving Linear	Method	More Work with	Step Functions Revisited
Equations with	Modeling with Systems	Parabolas	Piecewise Linear
Unspecified Constants	of Equations	The Shifted Form of	Functions
Inequalities	Solving Equations	Parabolas	Quadratic Models
Solving Linear	Graphically	Completing the	Limits on the Accuracy of
Inequalities	Solving Systems of	Square	our Models
Compound Inequalities	Inequalities	Stretching the	
Interval Notation	Modeling with Systems	Parabola and more	
Modeling with	of Inequalities	Completing the	Regents review
Inequalities		Square	
Unit #3-Functions		The Zeroes of	
Introduction to		Quadratics	
Functions		Zero Product Law	
Function Notation			
Graphs of Functions	Quarterly Review		
Graphical Features	Quarterly Test	Quarterly Review	
Exploring Functions		Quarterly Test	
Using the Graphing			
Calculator			
Average Rate of Change			
Fine Domain and Range			
Of a Function			
Quarterly Kevlew			
Quarterly rest			

Curriculum Map

Subject: Common Core Two Year Algebra Math 10S Second Year

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Unit #1 – The Building Blocks	Unit #4 – Linear Functions	Lessons 7-9	Unit #9- Roots and Irrational
of Algebra Review all	and Arithmetic Sequences	Exponential Models	Numbers
lessons with Supplemental	Review Lessons 1-5 with	Based on Percent	Square Roots
Worksheets	Supplemental Worksheets	Growth	Irrational Numbers
Rates, Patterns and	Proportional	Linear versus	Square Root Functions
Problem Solving	Relationships	Exponential	and Shifting
Variables and	Unit Conversions	Geometric Sequences	Solving Quadratics Using
Expressions	Non-proportional	Unit #7- Polynomials	Inverse Operations
The Commutative and	Linear Relationships	Review Lessons 1-4 with	Finding Zeroes by
Associative Properties	Graphing Linear	Supplemental Worksheets	Completing the Square
The Distributive	Functions (Lines)	Intro to Polynomials	The Quadratic Formula
Property	 Writing Equations in 	Multiplying	Cube Roots
Equivalent Expressions	Slope-Intercept Form	Polynomials	Unit #10– Exponents
Seeing Structure in	Unit 4 Lessons 6-13	Factoring	Graphical Displays of
Expressions	Modeling with Linear	Polynomials	Data
Exponents as Repeated	Functions	Factoring Based on	Quartiles and Box Plots
Multiplication	Linear Modeling	Conjugate Pairs	Measures of Central
More Complex	Strange Lines- Vertical	Lessons 5 and 6	Tendency
Equivalency	and Horizontal	 Factoring Trinomials 	Variation within a Data
Structure Work	Absolute Value and	More Factoring	Set
Translating English to	Step Functions	Unit #8- Quadratic	Two Way Frequency
Algebra	The Truth about	Functions and Their	Tables
Algebraic Puzzles	Graphs	Algebra	Bivariate Data Analysis
Unit #2 – Linear Expressions,	Graphs of Linear	Intro to Quadratic	Linear Regression on the
Equations and Inequalities	Inequalities	Functions	Calculator
Review all lessons with	Introduction to	More Work with	Other Types of
Supplemental Worksheets	Sequences	Parabolas	Regression
Equations and Their	 Arithmetic Sequences 	The Shifted Form of	Quantifying
Solutions		Parabolas	Predictability
Seeing Structure to	Review Unit 5 Systems of	Completing the	Residuals

	Solve Equations	Linear Equations and	Square	Unit #11- Functions and
\checkmark	A Linear Equation	Inequalities Lessons 1-8	Stretching the	Modeling
	Solving Review		Parabola and more	Function
\checkmark	Justifying Steps in	Unit #6 – Exponents Review	Completing the	Transformations
	Solving an Equation	Lessons 1-6 with	Square	Horizontal Stretching of
\succ	Linear Word Problems	Supplemental Worksheets	The Zeroes of	Functions
\succ	Linear Equations and	Simplifying	Quadratics	Discrete Functions
	Consecutive Integer	Expressions Involving	Zero Product Law	Linear and Exponential
	Games.	Exponents		Models
\succ	Solving Linear	Zero and Negative		Step Functions Revisited
	Equations with	Exponents	Quarterly Review	Piecewise Linear
	Unspecified Constants	 Exponential Growth 	Quarterly Test	Functions
\succ	Inequalities	Intro to Exponential		Quadratic Models
\succ	Solving Linear	Functions		Limits on the Accuracy of
	Inequalities	Percent Review		our Models
\succ	Compound Inequalities	Percent Increase and		
\succ	Interval Notation	Decrease		
\succ	Modeling with			Regents review
	Inequalities			
Quart	erly Review			
Quart	erly Test			
		Quarterly Review		
		Quarterly Test		

Subject: Common Core Algebra	G	rade Level: 9	8/14	
Quarter 1	Quarter 2	Quarter 3	Quarter 4	
Unit #1 – The Building Blocks	Unit #4 – Linear Functions	Unit #6 – Exponents (9	Unit #10- Exponents (10	
of Algebra (11 Days)	and Arithmetic Sequences	Days)	Days)	
Rates, Patterns and	(13 Days)	Simplifying	Graphical Displays of	
Problem Solving	Proportional	Expressions	Data	
Variables and	Relationships	Involving Exponents	Quartiles and Box Plots	
Expressions	Unit Conversions	Zero and Negative	Measures of Central	
The Commutative and	Non-proportional	Exponents	Tendency	
Associative Properties	Linear Relationships	 Exponential Growth 	Variation within a Data	
The Distributive	Graphing Linear	Intro to Exponential	Set	
Property	Functions (Lines)	Functions	Two Way Frequency	
Equivalent Expressions	Writing Equations in	Percent Review	Tables	
Seeing Structure in	Slope-Intercept Form	Percent Increase and	Bivariate Data Analysis	
Expressions	Modeling with Linear	Decrease	Linear Regression on the	
Exponents as Repeated	Functions	Exponential Models	Calculator	
Multiplication	Linear Modeling	Based on Percent	Other Types of	
More Complex	Strange Lines- Vertical	Growth	Regression	
Equivalency	and Horizontal	Linear versus	Quantifying	
Structure Work	Absolute Value and	Exponential	Predictability	
Translating English to	Step Functions	Geometric Sequences	Residuals	
Algebra	The Truth about	Unit #7- Polynomials (6		
 Algebraic Puzzles 	Graphs	days)	Unit #11- Functions and	
Unit #2 – Linear Expressions,	Graphs of Linear	Intro to Polynomials	Modeling (8 Days)	
Equations and Inequalities	Inequalities	Multiplying	Function	
(13 Days)	Introduction to	Polynomials	Transformations	
Equations and Their	Sequences	Factoring	Horizontal Stretching of	
Solutions	Arithmetic Sequences	Polynomials	Functions	
Seeing Structure to		Factoring Based on	Discrete Functions	
Solve Equations	Unit #5 – Systems of Linear	Conjugate Pairs	Linear and Exponential	
A Linear Equation	Equations and Inequalities	Factoring Trinomials	Models	
Solving Review	(8 Days)	Unit #8- Quadratic	Step Functions Revisited	
Justifying Steps in	Solutions to Systems	Functions and Their	Piecewise Linear	
Solving an Equation	and Solving by	Algebra (7 Days)	Functions	
Linear Word Problems	Graphing	Intro to Quadratic	Quadratic Models	
Linear Equations and	Solving Systems by	Functions	Limits on the Accuracy of	
Consecutive Integer	Substitution	More Work with	our Models	
Games.	Properties of Systems	Parabolas		
Solving Linear	and Their Solutions	The Shifted Form of		

>	Equations with Unspecified Constants Inequalities	 The Met Moo 	e Elimination thod deling with Systems	>	Parabolas Completing the Square	Regents review
	Solving Linear	of E	Equations		Stretching the	
	Inequalities	> Solv	ving Equations		Parabola and more	
>	Compound Inequalities	Gra	phically		Completing the	
	Interval Notation	> Solv	ving Systems of		Square	
	Modeling with	Inec	qualities		The Zeroes of	
	Inequalities	> Moo	deling with Systems		Quadratics	
Unit #	3-Functions (7 Days)	of li	nequalities	>	Zero Product Law	
	Introduction to			Unit #	9- Roots and	
	Functions			Irratio	nal Numbers (8	
	Function Notation			Days)		
	Graphs of Functions			\succ	Square Roots	
\triangleright	Graphical Features			\triangleright	Irrational Numbers	
\triangleright	Exploring Functions	Midterm R	Review	\triangleright	Square Root	
	Using the Graphing				Functions and	
	Calculator				Shifting	
\triangleright	Average Rate of Change			\triangleright	Solving Quadratics	
\triangleright	The Domain and Range				Using Inverse	
	of a Function				Operations	
				\succ	Finding Zeroes by	
					Completing the	
					Square	
				\triangleright	The Quadratic	
					Formula	
				\succ	Cube Roots	

Subject: Common Core Geometry

Grade Level 10

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Module 1: Congruence, proofs	<u>Module 1 Continued</u>	Trigonometry	Module 4: Connecting Algebra
and constructions	Congruence	(G-SRT.C.6, G-SRT.C.7, G-	<u>and Geometry through</u>
Basic constructions	(G-CO.7, G-CO.8)	SRT.C.8)	<u>coordinates</u>
(G-CO.1, G-CO.12, G-CO.13)	7. Proving properties of	1. The trigonometric	Slope Formula (G-GPE.5)
1. Equilateral triangle	parallelograms	ratios	1. Parallel and
2. Bisect an angle	8. Mid-segment of a	2. Def. of sine, cosine	perpendicular lines
3. Perpendicular bisector	triangle	and tangent	2. Equations of parallel and
4. Points of concurrency	9. Proving points of	3. sine and cosine of	perpendicular lines
	concurrency	complementary	
Unknown angles		angles	Distance Formula (G-GPE.7)
(G-CO.9)	<u>Module 2: Similarity, proof</u>	4. Problem solving	1. Using the distance
1. Angles and lines at a	<u>and trigonometry</u>	using sine and cosine	formula
point	Similarity and dilations	5. Applying tangents	2. Perimeter and area of
2. Transversals	(G-SRT.A.2, G-SRT.A.3, G-	6. Using trigonometry t	polygons
3. Auxiliary Lines	SRT.B.5, G-MG.A.1)	find angle measures	
4. Angles in a triangle	1. Dilations on the	7. Trigonometry and	Midpoint formula (G-GPE.6)
5. Writing proofs	coordinate plane	the Pythagorean	1. Dividing segments
6. Proofs with	2. Mapping segments	theorem	proportionally
constructions	and lines		2. Perpendicular bisectors
7. Proofs of geometric facts	3. Concentric circles	<u>Module 3: Extending to</u>	and distance from a line
	4. Dilations mapping	<u>three dimensions</u>	to a point
Transformations and rigid	angles	Area	
motions	5. Similarity	(G-GMD.A.1)	Coordinate Proofs (G-GPE.4)
(G-CO.2, G-CO.3, G-CO.4, G,	transformations	1. Properties of area	1. Squares and rectangles
CO.5, G-CO.6, G-CO.7, G-CO.12)	6. AA similarity	2. The scaling principle	2. Parallelograms and
1. Reflections on and off the	7. SAS and ASA	of area	Rhombi
coordinate plane	similarity	3. Planes	3. Trapezoids
2. Translations on and off			
the coordinate plane			

3.	Rotations on and off the					
4.	Symmetry	Api	olving similarity to			Module 5: Circles with and
5.	Compositions of rigid		triangles		Volume	without coordinates
	motions		(G-SRT.B.4)	(G-G	MD.A.1, G-GMD.A.3,	Similar circles (G-C.1)
6.	Congruence in terms of	1.	Side splitter theorem	-	G-GMD.B.4)	1. Proving circles are similar
	rigid motions	2.	Properties of similar	1.	General prisms and	
			triangles		cylinders	Chords, tangents and angles in
	Congruence	3.	Angle bisector	2.	General pyramids	circles (G-C.2)
	(G-CO.7, G-CO.8)		theorem		and cones	1. Central angles
1.	Introduction of proofs	4.	Special relationships	3.	Properties of Volume	2. Inscribed angles
2.	SAS triangle proofs		with right triangles	4.	Cavalieri's Principle	3. Intersecting chords
3.	Base angles of an	5.	Operations with	5.	Volumes of 3D	4. Parallel Chords
	isosceles triangle		radicals		figures	5. Angles exterior of a circle
4.	ASA and SSS	6.	Pythagorean theorem			
5.	AAS and HL	7.	Special right triangles			Constructions in circles (G-C.3)
6.	Triangle congruency			Quart	erly Assessment	1. Squares inscribed in a
	proofs	<u> </u>				circle
0		Quarte	erly Assessment			2. Hexagons inscribed in a
Quarte	erly Assessment					circie
						Arc lengths and sectors of
						Circles (G-C.1, G-C.2, G-C.5)
						1. Segment lenguis of
						tangents and socants
						tangents and secants.
						Equation of a circle (G-GPE.1)
						1. Center-radius form
						2. Standard form
						-
						Regents review
						Acgents review

Subject: Algebra 2/Trig(Common Core)

Grade Level: 11

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
 FIRST QUARTER Unit 1-Algebraic Essentials Review (6 Lessons) Lesson 1- Variables, Terms and Expressions Lesson 2-Solving Linear Equations A-CED.1 Lesson 3-Common Algebraic Expressions Lesson 4-Basic Exponent Manipulation N-RN.2 Lesson 5-Multiplying Polynomials A-SSE.2 Lesson 6-Using Tables on Your Calculator Unit 2-Functions as the Cornerstones of Algebra (7 Lessons) Lesson 1-Introduction to Functions Lesson 2-Function Notation Lesson 3-Function Composition Lesson 4-The Domain and Range of a Function Lesson 5-One to One Functions Lesson 5-One to One Functions Lesson 7-Key Features of Functions F-IF.9, F-IF.4 Unit 3-Linear Functions, Equations, and Their Algebra (7 lessons) Lesson 1-Direct Variation Lesson 3-Forms of a Line F- LE.2 Lesson 4-Linear Modeling F- LE.5 Lesson 5-Inverses of Linear Functions F-IF.9, Inear Functions F-IF.9, Inear Functions F-IF.9, Inear Functions Inear Function 	 SECOND QUARTER Unit 5-Sequences and Series (6 lessons) Lesson 1-Sequences F-IF.3, F-BF.2 Lesson 2-Arithmetic and Geometric Sequences F-BF.2, F-LE.2 Lesson 3-Summation Notation A-SSE.4 Lesson 5-Geometric Series Lesson 5-Geometric Series A-SSE.4 Unit 6-Quadratic Functions and Their Algebra (11 lessons) Lesson 1-Quadratic Function Review F-IF.4 Lesson 2-Factoring A-SSE.2 Lesson 3-Factoring Trinomials A-SSE.2 Lesson 5-Factoring by Grouping A-SSE.2 Lesson 6-The Zero Product Law A-APR.3, A-REI.4 Lesson 7-Quadratic Inequalities in One Variable A-CED.1 Lesson 8-Completing the Square and Shifting Parabolas F-BF.3 Lesson 10-Equations of Circles A-REI.7 Lesson 11-The Locus Definition of a Parabola G-GPE 	 THIRD QUARTER Unit 9-Complex Numbers (4 lessons) Lesson 1-Imaginary Numbers N-CN.1 Lesson 2-Complex Numbers N-CN.1, N-CN.2 Lesson 3-Solving Quadratic Equations with Complex Solutions A-REI.4, N-CN.7 Lesson 4-The Discriminant of a Quadratic A-REI.4, N-CN.7 Unit 10-Polynomial and Rational Functions (14 lessons) Lesson 1-Power Functions F-IF.4, F-BF.3 Lesson 2-Graphs and Zeroes of a Polynomial A-APR.3, F-IF.4, F-IF.7 Lesson 3-Creating Polynomial Equations F-IF.7 Lesson 4-Polynomial Identities A-APR.4 Lesson 5-Introduction to Rational Functions F-IF.4 Lesson 7-Multiplying Rational Expressions A-APR.6 Lesson 8-Combining Rational Expressions Using Addition and Subtraction A-APR.6 Lesson 10-Polynomial Long Division A-APR.6 Lesson 11-The Remainder Theorem A-APR.2, A-APR.6 	 FOURTH QUARTER Unit 12-Probability (6lessons) Lesson 1-Introduction to Probability Lesson 2-Sets and Probability S-CP.1 Lesson 3-Adding Probabilities S-CP.7 Lesson 4-Conditional Probability S-CP.3, S-CP.4, S-CP.5, S-CP.6 Lesson 5-Independent and Dependent Events S-CP.2, S-CP.4, S-CP.5 Lesson 6-Multiplying Probabilities S-CP.2, S-CP.4, S-CP.5 Lesson 1-Variability and Sampling S-IC.3 Lesson 2-Population Parameters Lesson 3-The Normal Distributions S-ID.4 Lesson 5-Sample Means S-IC.1, S-IC.2, S-IC.5 Lesson 6-Sample Proportions S-IC.1, S-IC.4 Lesson 7-The Difference in Sample Means S-IC.5 Lesson 8-Linear Regression and Lines of Best Fit S-ID.6(a)
Lesson 4-Linear Modeling F- LE.5 Lesson 5-Inverses of Linear	 Lesson 10-Equations of circles A-REI.7 Lesson 11-The Locus Definition 	• Lesson 11-The Remainder Theorem A-APR.2, A-APR.6	 Lesson 9-Other Types of Regression S-ID.6(a)
 Functions F-BF.4 Lesson 6-Piecewise Linear Functions Lesson 7-Systems of Linear Equations A-REI.6 (Primarily 3 by 3) Unit 4-Exponential and Logarithmic 	 of a Parabola G-GPE Unit 7-Transformations of Functions (5 lessons) Lesson 1-Shifting Functions F-BF.3 Lesson 2-Reflecting Parabolas F-BF.3 	 Lesson 12-Solving Rational Equations A-REI.2 Lesson 13-Solving Rational Inequalities A-CED.1 Lesson 14-Reasoning About Radical and Rational Equations A-REI.1 	

Functions (14 lessons)	 Lesson 3-Vertical Stretching 	Unit 11 -The Circular Functions (11	
 Lesson 1-Integer Exponents 	of Functions F-BF.3	lessons)	
N-RN.2	 Lesson 4-Horizontal Stretching 	 Lesson 1-Rotations and Angle 	
 Lesson 2-Rational Exponents 	of Functions F-BF.3	Terminology	
N-RN.1, N-RN.2	 Lesson 5-Even and Odd 	 Lesson 2-Radian Angle 	
 Lesson 3-Exponential Function 	Functions F-BF.3	Measurement F-TF.1	
Basics F-LE.5	Unit 8-Radicals and Their Quadratic	 Lesson 3-The Unit Circle F- 	
 Lesson 4-Finding Equations of 	Formula (7 lessons)	TF.2	
Exponentials F-LE.2	 Lesson 1-Square Root 	 Lesson 4-The Definition of the 	
 Lesson 5-The Method of 	Functions F-IF.4	Sine and Cosine Functions F-	
Common Bases A-CED.2	 Lesson 2-Solving Square Root 	TF.2, F-TF.8	
 Lesson 6-Exponential Modeling 	Equations A-REI.2	 Lesson 5-More Work with the 	
with Percent Growth and Decay	 Lesson 3-The Basic Exponent 	Sine and Cosine Functions F-	
A-CED.1, A-SSE.3	Properties N-RN.2	TF.2, F-TF.8	
 Lesson 7-Mindful Percent 	 Lesson 4-Fractional Exponents 	 Lesson 6-Basic Graphs of Sine 	
Manipulatives A-SSE.3	Revisited N-RN.1, N-RN.2	and Cosine F-TF.5, F-TF.7(e)	
 Lesson 8-Introduction to 	 Lesson 5-More Exponent 	 Lesson 7-Vertical Shifting of 	
Logarithms	Practice N-RN.2	Sinusoidal Graphs F-TF.5, F-	
 Lesson 9-Graphs of Logarithms 	 Lesson 6-The Quadratic 	TF.7(e)	
F-IF.4, F-IF.7(e)	Formula A-REI.4(b)	 Lesson 8-The Frequency and 	
 Lesson 10-Logarithm Laws 	 Lesson 7-More Work with the 	Period of a Sinusoidal Graph	
 Lesson 11-Solving Exponential 	Quadratic Formula A-REI.4(b)	F-TF.5, F-IF.7(e)	
Equations Using Logarithms		 Lesson 9-Sinusoidal Modeling 	
F-LE.4		F-TF.5, F-IF.7(e)	
 Lesson 12-The number e and 		 Lesson 10-The Tangent 	
the Natural Logarithm		Function F-TF.8	
F-LE.4		 Lesson 11-The Reciprocal 	
 Lesson 13-Compound Interest 		Functions F-TF.8	
F-IF.8, F-BF.1(a), A-SSE.3			
 Lesson 14-Newton's Law of 			
Cooling F-BF.1(b)			
5			

Subject: Algebra II		Grade Level: 11	8/13
FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
 REAL NUMBER SYSTEM & IT'S PROPERTIES (2) Solving Linear Equations Solving and Graphing Compound Inequalities Solving Absolute value equations Solving Absolute value inequalities Rational Expressions (3, 5) Review Basic Operations and Factoring Reducing rational expressions Multiplying rational expressions Dividing rational expressions Adding rational expressions Subtracting rational expressions Complex Fractions Solving Rational Equations 	 Radicals (3) Roots and Radicals Simplifying Radicals Adding and Subtracting Radicals Multiplying Radicals Dividing Radicals Rationalizing Denominators Solving Equations with Radicals 	Quadratics and Complex Numbers (2,4) Quadratic Formula Parabolas Quadratic Inequalities Imaginary Numbers Complex Numbers Adding and Subtracting Complex Numbers Multiplying Complex Numbers Multiplicative Inverse and Division of Complex Numbers	Relations and Functions (3, 4, 7) Relations Functions Function Notation Types of Functions Quadratic Functions Quadratic Functions Absolute Value Functions Circle Ellipse Hyperbola Name the Curve Inverse Variation Composition of Functions

Subject: Trigonometry	grade le	evel: 12	8/14
Quarter 1	Quarter 2	Quarter 3	Quarter 4
Quarter 1Unit #1 - ExponentialFunctions (14 Days)> Laws of Exponents> Zero and negative exponents> Zero and negative exponents> Fractional Exponents> Fractional Exponents> Exponential Functions and their graphs> Solving Exponential Equations> Applications of Exponential Functions	Quarter 2Unit #3 Con't-Trigonometric Functions(18Days)> Reciprocal Trig Functions> Trig Function Values> Reference Angles> Radian Measurement> Inverse Trig Functions> Co-Functions> Unit #4 - Graphs of	Quarter 3Unit #5 - TrigonometricIdentities (11 Days)> Basic Trig Identities> Proving Trig Identities> Applying Trig IdentitiesUnit #6- TrigonometricEquations (10 days)> Solving First and Second Degree	Quarter 4Unit #8- Statistics (13 Days)> Measures of Central Tendency> Measures of Dispersion> Mormal Distribution> RegressionsUnit #9- Probability (10 Days)> Counting Principle> Permutations and Combinations> Binomial Probability
 Unit #2 - Logarithmic Functions (15 Days) Inverse of an Exponential Function Logarithmic Form vs. Exponential From Properties of Logs Solving Logarithmic Equation Applications of Logarithmic Functions 	 Trigonometric Functions (17 Days) Domain and Range of Trig Functions Graphs of all Trig Functions Sketching Trig Functions Sketching Trig Functions Midterm Review 	 Second Degree Equations Solving Trig Equations using Substitution Unit #7- Applications of Trigonometry (13 Days) Area of a Triangle Law of Sines Law of Cosines Forces 	 Differentiate Probability Unit #10- Sequences and Series (8 Days) Sigma Notation Arithmetic Sequences and Series Geometric Sequences and Series Final Review
 Unit #3 - Trigonometric Functions (4 Days) ➢ Angles and Arcs as Rotations ➢ The Unit Circle ➢ Trig of the Right Triangle (sin, cos, tan) 			

Subject: Math: Pre-calculus (1 ^{stt} a	and 2 nd Quarters)/Introduction to C	alculus(3 rd and 4 th Quarters)	Grade Level: 12 rev 11/07
FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
Subject: Math: Pre-calculus (1 ^{stt} a FIRST QUARTER FUNCTIONS AND GRAPHS (1,6) • Domain and Range • Functions and their Properties • Classifications of Basic Functions • Applications of Piecewise Functions • Transformations including Vertical/Horizontal Shifts, Line Reflections	 and 2nd Quarters)/Introduction to C SECOND QUARTER LINEAR PROGRAMMING (1,4,5) Graphing inequalities Finding Max and Min values of a function Solving Linear Programming Word Problems MATRICES (1,5) add, subtract, multiply 	alculus(3 rd and 4 th Quarters) THIRD QUARTER EXPONENTIAL AND LOGISTIC MODELING (1, 4,5,6) • Euler Number • In e • Exponential Growth and Decay Problems • Math Finance INTRODUCTION TO CALCULUS (1.34,5,6,9,13)	Grade Level: 12 rev 11/07 FOURTH QUARTER INTRODUCTION TO CALCULUS (1,3,4,5,6,9,13) DERIVATIVES • Graphically • Concavity, POI, Inc/Dec Intervals • Integration • indefinite integral • definite integral
 Line Reflections Horizontal and Vertical Asymptotes Symmetries Modeling with Functions POLNOMIAL, POWER AND RATIONAL FUNCTIONS (1,6) Slope-intercept and point-slope formulas Modeling with Linear and Quadratic Functions Modeling with Power Functions 	 add, subtract, multiply inverse equations applications CONIC SECTIONS (1,5) circle parabola hyperbola ellipse application problems 	 (1,3,4,5,6,9,13) limits delta process differentiation power product rule quotient rules max - min problems related rate problems Motion, Velocity, Acceleration 	 area under curve area between two curves
 Finding Roots of Higher Degree Functions Pattern, Degree, End Behavior Intervals where Functions are Inc/Dec Local and Global Max and Min Optimizations Problems 	 PARAMETRIC EQUATIONS (1,4,6) algebraic solution graphical solution use to model motion 		

FIRST QUARTERSECOND QUARTERTHIRD QUARTERFOIFUNCTIONS AND GRAPHS (1,6)EXPONENTIAL AND LOGISTICPOLAR COORDINATES (1,5)INT• Domain and RangeMODELING (1, 4,5,6)• Conversion into Polar(1,3)• Functions and their Properties• Euler Number• Conversion into Polar(1,3)• Classifications of Basic Functions• In e• Graphs of PolarsTRI• Classifications of Piecewise Functions• Math FinanceINTRODUCTION TO CALCULUSTRI• Transformations including Vertical/Horizontal Shifts, Line ReflectionsMATRICES (1,5)• Imits• Imits• Horizontal , Vertical, Slant and End Behavior Asymptotes• add, subtract, multiply• inverse• Imits• Modeling with Functions• circle • parabola• problems• circle • parabola• max - min problems• DOLNOMIAL, POWER AND RATIONAL FUNCTIONS (1,6)• hyperbola• mycroblems• max - min problems• Line• parabola • hyperbola• pycroblems• max - min problems• max - min problems	DURTH QUARTER TRODUCTION TO CALCULUS ,3,4,5,6,9,13) RIGONOMETRY DERIVATIVES • Basic Trig Derivatives/Rules • Chain Rule
FUNCTIONS AND GRAPHS (1,6)EXPONENTIAL AND LOGISTICPOLAR COORDINATES (1,5)INT• Domain and Range• Euler Number• Conversion into Polar(1,3)• Functions and their Properties• In e• Coordinates• Coordinates• Classifications of Basic Functions• Exponential Growth and Decay Problems• Graphs of PolarsTRI• Applications of Piecewise Functions• Math FinanceINTRODUCTION TO CALCULUS (1,3,4,5,6,9,13)INTRODUCTION TO CALCULUS (1,3,4,5,6,9,13)TRI• Horizontal Vertical, Slant and End Behavior Asymptotes • Modeling with FunctionsNATRICES (1,5)• limits• limits• Modeling with Functions• applications• equations • applications• product rule • parabola• problems• POLNOMIAL, POWER AND RATIONAL FUNCTIONS (1,6)• hyperbola• modeling • hyperbola• modeling • hyperbola• modeling 	VTRODUCTION TO CALCULUS ,3,4,5,6,9,13) VIGONOMETRY DERIVATIVES • Basic Trig Derivatives/Rules • Chain Rule
and End Behavior • equations • product rule ANI Asymptotes • applications • quotient rules • chain rule • Modeling with Functions • CONIC SECTIONS (1,5) • max - min problems • max - min problems POLNOMIAL, POWER AND • circle • related rate problems • Motion, Velocity, Acceleration (1,6) • hyperbola • hyperbola • max - min problems	 Implicit Differentiation Derivatives of Inverse Sine and Tangent
 Symmetries Modeling with Functions POLNOMIAL, POWER AND RATIONAL FUNCTIONS (1,6) CONIC SECTIONS (1,5) CONIC SECTIONS (1,5) CONIC SECTIONS (1,5) Conic le Con	 ND LOGARITHMIC FUNCTIONS Derivatives of Exponential
POLNOMIAL, POWER AND • circle • related rate problems RATIONAL FUNCTIONS • parabola • Motion, Velocity, Acceleration (1,6) • hyperbola • DIG ONON UTION DEDUct TURES	 Functions Derivatives of Logarithmic Functions
 Slope-intercept and point-slope formulas Modeling with Linear and Quadratic Functions Modeling with Power Modeling with Power Figure 1 Figure 2 Figure 3 Figure	
Functions PARAMETRIC EQUATIONS (1,4,6) Tangent • Finding Roots of Higher Degree Functions • algebraic solution • algebraic solution • Complex Roots • graphical solution • use to model motion • Pattern, Degree, End Behavior • use to model motion • use to model motion • Intervals where Functions are Inc/Dec • Local and Global Max and Min • Use To model motion	

Subject: Math: Calculus AB	Grade	e Level: 12	rev 11/07
FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
 FUNCTIONS & GRAPHS inequalities absolute value distance & midpoint equation of line symmetry domain & range classifying functions LIMITS & CONTINUITY limits to infinity right and left hand limits constant, sum, product and quotient limits asymptotes non-existent limits CONTINUITY definition graphical interpretation absolute extrema intermediate value theorem DIFFERENTIAL CALCULUS definition of derivative derivative of algebraic functions product, quotient rule, chain rule derivative of trig function implicit differentiation 	 higher order derivative differentiability & continuity exponential and log derivatives inverse sine and tangent derivative APPLICATIONS OF DERIVATIVE slope of tangent & normal intervals of increase & decrease concavity point of inflection curve sketching linear approximation Rolle's theorem mean value theorem related rate problems absolute extrema curve sketching applied extrema problems average & instantaneous rate of change rectilinear motion 	 INTEGRAL CALCULUS antiderivative applications to distance and velocity definite integral Fundamental Theorem of Calculus approx of definite integral slope fields rectangular approximation LRAM,RRAM,MRAM, Trapezoidal 	 APPLICATIONS OF INTEGRATION Continuous growth problems Integrals as an accumulator areas average value of function volumes of solids - cross sections volumes of revolution –discs, washers and shells REVIEW FOR AP EXAM Long term project

Subject: Math: AP Statistics	Grade l	Level: 11 or 12	rev 11/07	
FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	
Exploring DataI. Interpreting graphical displays of distributions of univariate data• Center, spread, shape• Outliers and other unusual featuresII. Summarizing distributions of univariate data• Center; median, mean• Spread, range, IQR, standard deviation quartiles, percentiles, standardized scores boxplotsIII. Comparing distributions of univariate data• Comparing center and spread; within group and between groups, clusters and gaps, outliers and other unusual features• Comparing shapesIV. Exploring bivariate data• Scatterplots• Correlation, linearity, LSRL • Residual plots• Outliers, influential points• TransformationsV. Exploring categorical data	Planning a Study I. Overview of methods of data collection II. Planning & conducting surveys • Well designed and conducted surveys • Populations, samples, and random selection, bias III. Plan & conduct experiments • Treatments, control groups, experimental units, random assignments, and replication • Sources of bias and confounding, including placebo effect and blinding • Randomization IV. Generalizing results from observational and experimental studies, and surveys • Maticipating Patterns I. Probability as relative frequency • "Law of large numbers" • Addition rule, multiplication rule, conditional probability, and independence • Discrete random variables • Simulation • Expected value	 II. Combining independent random variables Independence, mean & standard deviation of random variables sums III. The normal distribution IV. Sampling distributions Sample proportions, means Central limit theorem Difference between two independent sample proportions and means Simulations Statistical Inference I. Large Sample Confidence intervals Proportions and means II. Tests of significance Logic of significance testing, null & alternative hypotheses; <i>p</i>-values; one-and two-sided tests; concepts of Type I and Type II errors; concept of power Large sample test for a proportions and means 	 Chi-squares test for goodness of fit, homogeneity of proportions, and independence (one- and two- way tables) Special case of normally distributed data T-distribution Single sample t procedures Two sample (independent and matched pairs) t procedures Inference for the slope of least-squares regression line from computer outputs Review for AP Exam Long term statistical project 	