Algebra II / Trigonometry

Quarter	SOL #	Standard	Timeline
1	**1, 4, 8**	**Equations and Inequalities** A. Apply Properties of Real Numbers B. Evaluate and Simplify Algebraic Expressions C. Solve Linear Equations D. Rewrite Formulas and Equations E. Solve Linear Inequalities F. Solve Absolute Value Equations and Inequalities G. Use Absolute Value Functions and Transformations	**5 blocks/ 10 days**
	4 ,8, 9, 20	**Linear Equations and Functions** A. Represent Relations and Function B. Find Slope and Rate of Change C. Graph Equations of Lines D. Graph Linear Inequalities in Two Variables E. Write Equations of Lines	**5 blocks/ 10 days**
	1, 11, 12, 13	**Linear Systems and Matrices** A. Solve Linear Systems by Graphing B. Solve Linear Systems Algebraically C. Graph Systems of Linear Inequalities D. Linear Programming E. Perform Basic Matrix Operations F. Multiply Matrices G. Evaluate Determinants, Apply Cramer's Rule H. Use Inverse Matrices to Solve Linear Systems I. Solve Systems of Linear Equations in Three Variables ***Calculators will be used with matrices.**	**5 blocks/ 10 days**
		Polynomials, Polynomial Functions, and Rational Functions A. Use Properties of Exponents B. Evaluate & Graph Polynomial Ftns. C. Add, Subtract, Multiply Polynomials D. Factor Using Special Patterns, Perfect Squares, Trial and Error, Grouping E. Solve $x^2 + bx + = 0$ by factoring F. Factor and Solve Polynomial Equations	**6 blocks/ 12 days**
		Review & DBA Testing	**2 blocks/ 4 days**
		Total	**9 wks.**

		Rational Functions – Unit 2
		  A. Apply the Remainder and Factor Theorem
		  B. Multiply& Divide Rational Expressions
		  C. Add and Subtract Rational Expressions
		  D. Solve Rational Equations
			5 blocks/ 10 days

	1, 3, 7	**Radicals**
		  A. Evaluate n^{th} roots and use rational Exponents
		  B. Apply Properties of Rational Exponents
		  C. Solve Radical Equations
		  D. Evaluate Logarithms (no graphs)
		  E. Apply Properties of Logarithms
		  F. Solve Exponential Logarithmic Equations
			6 blocks/ 12 days

2	**1, 3, 6, 8,**
	
	14, 15, 17
		Quadratic Functions
		  A. Graph Quadratic Functions in Standard Form
		  B. Graph Quadratic Functions in Cartesian Form
		  C. Solve Quadratic Equations by Finding Square Roots
		  D. Perform Operations With Complex Numbers
		  E. Complete the Square
		  F. Use the Quadratic Formula and Discriminant
		  G. Solve and Graph Quadratic Inequalities
			6 blocks/ 12 days

	9, 10, 15	**Functions**
		  A. Perform Function Operations and Compositions
		  B. Use Inverse Functions
		  C. Analyze Graphs of Polynomial Functions
		  D. Write Polynomial Functions
		  E. Graph Square Root and Cube Root Functions
			3 blocks/ 6 days

		Review & Exams	**2 blocks/ 4 days**
		Total	**9 wks.**

3	**8, 9, 20**	**Rational Functions – Unit 3** A. Model Direct, Inverse and Joint Variation B. Graph Simple Rational Functions C. Graph General Rational Functions	**4 blocks/ 8 days**
	14, 18	**Conics Sections** A. Apply Distance and Midpoint Formulas B. Graph & Write Equations of Parabolas C. Graph & Write Equations of Circles D. Graph & Write Equations of Ellipses E. Graph & Write Equations of Hyperbolas F. Translate and Classify Conic Sections G. Solve Quadratic Systems	**8 blocks/ 16 days**
	8, 16	**Sequences and Series** A. Define and Use Sequences and Series B. Analyze Arithmetic Sequences and Series C. Analyze Geometric Sequences and Series D. Find Sums of Infinite Geometric Series	**4 blocks/ 8 days**
	19	**Scatter Plots** A. Graph Scatter Plots B. Identify Line of Best Fit C. Make Predictions	**2 blocks/ 4 days**
		Trigonometric Ratios and Functions A. Use Trigonometry With Right Triangles B. Define General Angles and Use Radian Measure C. Evaluate Trigonometric Functions of Any Angle	**5 blocks/ 10 days**
		Review & DBA Testing	**2 blocks/ 4 days**
		Total	**9 wks.**

4		**Solving Triangles & Evaluating Inverses**
		  D. Apply Law of Sines
		  E. Apply Law of Cosines
		  G. Evaluate Inverse Trig Functions
			**4 blocks/
			8 days**

		Trigonometric Graphs
		  A. Graph sine, cosine and tangent
		      Functions
		  B. Translate and Reflect Trigonometric
		      Graphs
			**4 blocks/
			8 days**

		SOL Review and Testing	**4 blocks/ 8 days**

		Trigonometric Identities & Equations
		  A. Verify Trigonometric Identities
		  B. Solve Trigonometric Equations
		  C. Apply Sum / Difference Identities
		  D. Apply Double Angle, and Half Angle
		      Identities
			**6 blocks/
			12 days**

		Remediation / Enrichment / Testing	**3 blocks/ 6 days**
		Total	**9 wks.**