

**Algebra/Trig
Grades 10-12
AMSCO's Algebra II and Trigonometry**

Month	Chapter/Topic	Time Frame	Text Sections	Content	Assessments	NYS Standard
September	The Rational Numbers Chapter 1	2 weeks	1-1 through 1-1-8	<ul style="list-style-type: none"> • First Degree Equations and Inequalities • Operations with Polynomials • Factoring Polynomials • Solving Absolute Value Equations • Solving Absolute Value Inequalities • Solving Quadratic Equations and Inequalities 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A1,A4, A7,
	Rational Expressions Chapter 2	2 Weeks	2-1 through 2-8	<ul style="list-style-type: none"> • Reducing Rational Expressions • Multiplying Rational Expressions • Dividing Rational Expressions • Adding or subtracting rational expressions with the same denominator • Adding or subtracting rational expressions with unlike denominators • Simplifying Complex Fractions and Complex 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A16; A17, A23

				<ul style="list-style-type: none"> Polynomial Functions The Algebra of Functions Compositions of Functions Inverse Functions Completing the Square The Circle Inverse Variation Transformations with Functions 	Learning Activities	
November	Quadratic Functions and Complex Numbers Chapter 5	2 ½ weeks	5-1 through 5-9	<ul style="list-style-type: none"> Real roots of a quadratic equation Quadratic Formula The Discriminant Complex Numbers Operations with Complex Numbers Sum and Product of Roots Solving Higher degree polynomial equations Solving Systems of Equations Algebraically Solving Systems of Equations Graphically Solving Systems of Inequalities Graphically 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A2; A3; A4; A20; A21; A24; A25; A26; A2.N6; N7; N8; N9
December	Exponential Functions Chapter 7	1 week	7-1 through 7-7	<ul style="list-style-type: none"> Laws of Exponents Zero and Negative Exponents Fractional exponents Exponential Functions and their graphs Solving Equations involving exponents 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A8,9,10,11, 12, 27, 53; A2.N1

				<ul style="list-style-type: none"> • Solving exponential equations • Applications of exponential functions 		
December	Series and Sequences Chapter 6	1 week	6-1 through 6-6	<ul style="list-style-type: none"> • Sequences • Arithmetic Sequences • Sigma Notation • Geometric Sequences • Geometric Series 		A2.N10; A2.A33; A34; A35
January	Logarithmic Functions Chapter 8	2 weeks	8-1 through 8-7	<ul style="list-style-type: none"> • Exponential Functions and their inverses • Logarithmic Form of an exponential Equation • Logarithmic Relationships • Natural Logarithms • Exponential Equations • Logarithmic Equations 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A 6; A18,A19,A27,A28, A54

January Continued	Trigonometric Functions Chapter 9	2 ½ weeks	9-1 through 9-8	<ul style="list-style-type: none"> • The Right Triangle • Angles and Arcs as Rotations • The Unit Circle: Sine and Cosine • The Tangent Function • Reciprocal Trigonometric Functions • Function Values of Special Angles • Function Values from the Calculator • Reference angles and the Calculator 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2A.55; 56; 57; 58; 60; 61; 62; 66
February	More Trigonometric Functions Chapter 10	1 week	10-1 through 10-3 10-5, 10-6	<ul style="list-style-type: none"> • Radian Measure • Trigonometric functions involving radian measure • Pythagorean Identities • Inverse Trigonometric Functions • Cofunctions 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.M2; A2.A46, 58,61,64
February (Continued)	Graphs of Trigonometric Functions Chapter 11	3 weeks	11-1 through 11-8	<ul style="list-style-type: none"> • Graph of Sine Function • Graph of Cosine Function • Amplitude, Period, and 	Homework Quizzes Chapter Exam School Island	A2.A63; 65; 69; 70; 71; 72

				<ul style="list-style-type: none"> Phase Shift • Writing the Equation of a Sine or Cosine Graph • Graphing the Tangent Function • Graphing the Reciprocal Function • Graphs of Inverse Trigonometric Functions • Sketching Trigonometric Graphs 	Senteo Cooperative Learning Activities	
March	Trigonometric Identities Chapter 12	1 ½ weeks	12-1; 12-3 through 12-8	<ul style="list-style-type: none"> • Basic Identities • Sum and difference of two angle measures sine, cosine and tangent • Function values of double angles • Function values of half angles 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A67,76, 77
	Trigonometric Equations Chapter 13	2 weeks	13-1 through 13-5	<ul style="list-style-type: none"> • Solving Trigonometric Equations Involving More than One Function • Solving Trigonometric Equations Involving Different Angle Measures 		A2.A68
	Trigonometric Applications Chapter 14		14-2	<ul style="list-style-type: none"> • Law of Cosines 		

April	Trigonometric Applications Chapter 14	2 weeks	14-3 through 14-7	<ul style="list-style-type: none"> • Area of a Triangle • Law of Sines • The Ambiguous Case • Solving Triangles 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.A73; 74; 75
May	Statistics Chapter 15	2 ½ weeks	15-1 through 15-10	<ul style="list-style-type: none"> • Gathering Data • Measures of central tendencies • Measures of Dispersion • Variance and standard deviation • Normal distribution • Bi-variate statistics • Correlation Coefficient • Nonlinear Regression • Interpolation and Extrapolation 	Homework Quizzes Chapter Exam School Island Senteo Cooperative Learning Activities	A2.N.10 A2.S.1,2,3,4,5,6,7,8
May Continued	Probability and the Binomial Theorem Chapter 16	1 ½ weeks	16-1 through 16-6	<ul style="list-style-type: none"> • Counting Principle • Permutations and combinations • Probability • Probability with Two 	Homework Quizzes Chapter Exam School Island Senteo	A2.S.9, 10, 11, 12, 13; A2.A36

				Outcomes <ul style="list-style-type: none"> • Binomial Probability and the Normal Curve • Binomial Theorem 	Cooperative Learning Activities	
June	Review for Regents	2 weeks		Review all topics Chapter 1 though 16	Regents Review Booklet	