ENRY LEARNING PROGRESSIONS

GSE Algebra II
Math

Quarter 1		Quarter 2	Quarter 3		Quarter 4	
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**
4 Weeks	*4 Weeks*	*5 Weeks*	*8 Weeks*	*5 Weeks*	*5 Weeks*	*5 Weeks*
Quadratics Revisited	**Operations with Polynomials**	**Polynomial Functions**	**Rational and Radical Relationships**	**Exponential and Logarithms**	**Mathematical Modeling**	**Inferences and Conclusions from Data**
Perform arithmetic operations with complex numbers. MGSE9-12.N.CN.1 (Complex numbers) MGSE9-12.N.CN.2 (Complex numbers & properties) MGSE9-12.N.CN.3 (Conjugate of complex numbers) Use complex numbers in polynomial identities and equations. MGSE9-12.N.CN.7 (Solve quadratics with complex solutions)	Perform arithmetic operations on polynomials MGSE9-12.A.APR.1 (Add, subtract & multiply polynomials) MGSE9-12.A.APR.5 (Binomial Theorem) Rewrite rational expressions MGSE9-12.A.APR.6 (Rewrite rational expressions) Build a function that models a relationship between two quantities MGSE9-12.F.BF.1 (Write a function) MGSE9-12.F.BF.1b	Use complex numbers in polynomial identities and equations. MGSE9-12.N.CN.9 (Fundamental Theorem of Algebra) Interpret the structure of expressions MGSE9-12.A.SSE.1 MGSE9-12.A.SSE.1a MGSE9-12.A.SSE.1b (Interpret expressions; Interpret parts & terms of expressions) MGSE9-12.A.SSE.2 (Equivalent expressions) Understand the relationship between zeros and factors of polynomials MGSE9-12.A.APR.2 (Remainder Theorem) MGSE9-12.A.APR.3 (Identify zeros) Use polynomial identities to solve problems MGSE9-12.A.APR.4 (Polynomial Identities) Interpret functions that arise in applications in terms of the context MGSE9-12.F.IF.4	Rewrite rational expressions MGSE9-12.A.APR.7 (Rewrite rational expressions) Write expressions in equivalent forms to solve problems MGSE9-12.A.CED.1 (Create equations & inequalities-1 variable) MGSE9-12.A.CED.2 (Create equations & inequalities-2 variables) Understand solving equations as a process of reasoning and explain the reasoning MGSE9-12.A.REI.2 (Solve simple radical & rational equations) Interpret functions that arise in applications in terms of the context MGSE9-12.F.IF.4 (Characteristics of functions)	Write expressions in equivalent forms to solve problems MGSE9-12.A.SSE.3 (Equivalent expressions) MGSE9-12.A.SSE.3c (Properties of exponents) Analyze functions using different representations MGSE9-12.F.IF.7 (Graph functions) MGSE9-12.F.IF.7e (Graph exponential & logarithmic functions) MGSE9-12.F.IF.8 (Write a function) MGSE9-12.F.IF.8b (Interpret expressions) Build new functions from existing functions MGSE9-12.F.BF.5 (Inverse relationships) Construct and compare linear, quadratic, and	Write expressions in equivalent forms to solve problems MGSE9-12.A.SSE.4 (Derive formula for sum of finite geometric series) MGSE9-12.A.CED.1 (Create equations & inequalities-1 variable) MGSE9-12.A.CED.2 (create equations & inequalities-2 variables) MGSE9-12.A.CED.3 (Represent constraints) MGSE9-12.A.CED.4 (Rearrange formulas) Represent and solve equations and inequalities graphically MGSE9-12.A.REI.11 (Solutions to equations) Interpret functions that arise in applications in terms of the context	Summarize, represent, and interpret data on a single count or measurement variable MGSE9-12.S.ID.2 (Shape and data distribution) MGSE9-12.S.ID.4 (Fit to a normal distribution) Understand and evaluate random processes underlying statistical experiments MGSE9-12.S.IC.1 (Inferences from a random sample) MGSE9-12.S.IC.2 (Using simulations) Make inferences and justify conclusions from sample surveys, experiments, and observational studies MGSE9-12.S.IC.3 (Randomization)

MGSE9-12.N.CN.8 (Factoring with complex solutions) Solve equations and inequalities in one variable MGSE9-12.A.REI.4 (Solve quadratics in 1 variable) MGSE9-12.A.REI.4b (Solve quadratic equations by inspection) Extend the properties of exponents to rational exponents. MGSE9-12.N.RN.1 (Rational exponents) MGSE9-12.N.RN.2 (Expressions with radicals & rational exponents)	(Combine standard functions) MGSE9-12.F.BF.1c (Compose functions) Build new functions from existing functions MGSE9-12.F.BF.4 (Inverse functions) MGSE9-12.F.BF.4a (f(x)=c & inverse) MGSE9-12.F.BF.4b (Use composition to verify inverses) MGSE9-12.F.BF.4c (Values of inverse function from graph or table)	(Characteristics of functions) Analyze functions using different representations MGSE9-12.F.IF.7 (Graph functions) MGSE9-12.F.IF.7c (Graph polynomial functions)	MGSE9-12.F.IF.5 (Domains of functions) Analyze functions using different representations MGSE9-12.F.IF.7 (Graph Functions) MGSE9-12.F.IF.7b (Graph square rt, cube rt, piecewise, step & absolute value functions) MGSE9-12.F.IF.7d (Graph rational functions)	exponential models and solve problems MGSE9-12.F.LE.4 (Express exponential models as logarithmic)	MGSE9-12.F.IF.6 (Average rate of change) MGSE9-12.F.IF.9 (Compare 2 functions) Build new functions from existing functions MGSE9-12.F.BF.3 (Build new functions from existing functions)	MGSE9-12.S.IC.4 (Population mean) MGSE9-12.S.IC.5 (Compare 2 treatments) MGSE9-12.S.IC.6 (Evaluate reports based on data)