

GSE Algebra II Math

4 X 4 Block

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
2 Weeks	2 Weeks	2.5 Weeks	4 Weeks	2.5 Weeks	2.5 Weeks	2.5 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	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	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	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	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)	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)	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)

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(Solve quadratics with complex solutions) 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)	(Write a function) MGSE9-12.F.BF.1b (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)	(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 (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.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) 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)	Build new functions from existing functions MGSE9-12.F.BF.5 (Inverse relationships) Construct and compare linear, quadratic, and exponential models and solve problems MGSE9-12.F.LE.4 (Express exponential models as logarithmic)	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 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)	Make inferences and justify conclusions from sample surveys, experiments, and observational studies MGSE9-12.S.IC.3 (Randomization) 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)
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