



Franklin County School District
Mathematics for College Algebra
Textbook: College Prep Algebra (Cengage)
Course Code: 1200710

Semester 1	
Instructional Units & Standards Focus	
Quarter 1	Quarter 2
(Chapter 3): Equations, Inequalities, & Problem Solving Students will rearrange equations or formulas to isolate a quantity of interest. When given a mathematical or real-world context, students will write and solve one-variable absolute value inequalities and represent solutions algebraically and graphically. MA.912.AR.1.2, MA.912.AR.4.2	(Chapter 6): Factor Polynomials Students will solve and graph mathematical and real-world problems that are modeled with quadratic functions and interpret key features and determine constraints in terms of the context. MA.912.AR.3.8
(Chapter 4): Graphs & Functions Students will graph a function given a table, equation, or written description of a linear functions, and determine and interpret its key features. Students will solve and graph mathematical and real-world problems that are modeled with linear functions, absolute value functions and piecewise functions. MA.912.AR.1.2, MA.912.AR.2.4, MA.912.AR.2.5, MA.912.AR.4.4, MA.912.F.1.2, MA.912.F.1.3, MA.912.F.1.6	(Chapter 7): Rational Expressions, Equations, & Functions Students will apply previous understanding of rational number operations to add, subtract, multiply, and divide rational algebraic expressions. Students will write and solve one-variable rational equations and interpret the solutions as viable in terms of the context and identify any extraneous solutions. MA.912.AR.1.9, MA.912.AR.8.1, MA.912.F.1.1, MA.912.F.1.2, MA.912.F.1.6
(Chapter 5): Exponents & Polynomials Students will create equivalent algebraic expressions using the properties of exponents. They will add, subtract, and multiply polynomial expressions with rational number coefficients. Students will divide polynomial expressions using long and synthetic division or algebraic manipulation. Given a mathematical or real-world context, combine two or more linear, quadratic, exponential, or polynomial functions using arithmetic operations. MA.912.AR.1.3, MA.912.AR.1.56, MA.912.F.3.2, MA.912.NSO.1.2	



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Semester 2	
Instructional Units & Standards Focus	
Quarter 3	Quarter 4
(Chapter 8): Systems of Equations & Inequalities Students will solve systems of equations by graphing, substitution, and elimination and graph the solution set of a system of two-variable linear inequalities. Students will represent constraints as a system of linear equations or inequalities, given real-world context. MA.912.AR.9.4, MA.912.AR.9.6, MA.912.AR.1.4, MA.912.AR.1.7, MA.912.F.1.1, MA.912.F.1.6, MA.912.F.3.2, MA.912.F.3.4	(Chapter 11): Exponential & Logarithmic Functions Students will solve one-variable equations involving logarithms or exponential expressions and interpret solutions as viable in terms of the context and identify extraneous solutions. Students will examine differences between linear and non-linear functions and compare features. Students will explore inverse functions and represent inverses algebraically, graphically, or in a table. MA.912.AR.1.2, MA.912.AR.5.2, MA.912.AR.5.4, MA.912.AR.5.6, MA.912.AR.5.7, MA.912.AR.5.8, MA.912.AR.5.9, MA.912.F.1.2, MA.912.F.1.6, MA.912.F.3.4, MA.912.F.3.6, MA.912.F.3.7, MA.912.NSO.1.6, MA.912.NSO.1.7
(Chapter 9): Radicals & Complex Numbers Students will extend previous understanding of the Laws of Exponents to include rational exponents and apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions involving rational exponents. Students will solve one-variable radical equations and interpret solutions as viable in terms of context and identify any extraneous solutions. MA.912.AR.7.1, MA.912.F.1.2, MA.912.NSO.1.1, MA.912.NSO.1.2, MA.912.NSO.1.3	(Chapter 13): Sequences, Series, & the Binomial Theorem Students will write the terms of sequences, find the apparent n th term of a sequence, sum the terms of a sequence to obtain a series, recognize, write, and find the n th term, the n th partial sum of arithmetic sequences, use arithmetic sequences to solve application problems. Students will recognize, write and find the n th terms of geometric sequences, finite and infinite sums of geometric sequences, application of geometric sequences, use the Binomial Theorem to calculate binomial coefficients.
(Chapter 10): Quadratic Equations, Functions, & Inequalities Given a table, equation, or written description of a quadratic function, graph that function, and determine and interpret its key features. Students	



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will solve and graph mathematical and real-world problems that are modeled with quadratic functions.

MA.912.AR.3.7, MA.912.AR.3.8, MA.912.F.1.2, MA.912.F.1.6,
MA.912.F.3.2, MA.912.F.3.4