

**CORRELATION**  
**FLORIDA DEPARTMENT OF EDUCATION**  
**INSTRUCTIONAL MATERIALS CORRELATION**  
**COURSE STANDARDS**

<b>SUBJECT:</b>	Mathematics
<b>GRADE LEVEL:</b>	9-12
<b>COURSE TITLE:</b>	Algebra 2
<b>COURSE CODE:</b>	1200330
<b>SUBMISSION TITLE:</b>	Algebra 2
<b>TITLE ID:</b>	9781578374199
<b>PUBLISHER:</b>	Cord Communications
<b>PUBLISHER ID:</b>	74-2646794-01

					*I/M = INDEPTH OR MENTIONED				
					Committee Member Evaluation (Committee Member Use Only)				
BENCHMARK CODE	BENCHMARK	DEPTH OF KNOWLEDGE	PAGES OR LOCATIONS WHERE BENCHMARK IS DIRECTLY ADRESSED IN MAJOR TOOL	I/M*	Thoroughly	Highly	Adequately	Minimally	Not At All
LA.910.1.6.1	The student will use new vocabulary that is introduced and taught directly;		New vocabulary words are highlighted in yellow throughout the text, for example pages 4, 6, 7, 11	I					
LA.910.4.2.1	The student will write in a variety of informational/expository forms, including a variety of technical documents (e.g., how-to-manuals, procedures, assembly directions);		Math Labs at the end of each chapter as well as the Math Applications sections in each chapter allow for students to be exposed to technical documents	I					
MA.912.A.1.6	Identify the real and imaginary parts of complex numbers and perform basic operations.	Moderate	Lesson 5.5	I					
MA.912.A.2.5	Graph absolute value equations and inequalities in two variables.	Moderate	Lesson 1.3	I					
MA.912.A.2.6	Identify and graph common functions (including but not limited to linear, rational, quadratic, cubic, radical, absolute value).	Moderate	Lessons 1.5, 2.1, 4.3, 4.4, 4.5, 6.1, 8.1, 10.1	I					
MA.912.A.2.7	Perform operations (addition, subtraction, division, and multiplication) of functions algebraically, numerically, and graphically.	Moderate	Lessons 4.1, 4.2, 4.3, 4.4, 4.5	I					
MA.912.A.2.8	Determine the composition of functions.	Low	Lessons 4.1, 4.2	I					
MA.912.A.2.10	Describe and graph transformations of functions	Moderate	Lesson 4.5	I					
MA.912.A.2.11	Solve problems involving functions and their inverses.	High	Lesson 4.3	I					
MA.912.A.2.12	Solve problems using direct, inverse, and joint variations.	High	Lesson 10.6	I					
MA.912.A.3.3	Solve literal equations for a specified variable.	Moderate	Lesson 2.2	M					
MA.912.A.3.6	Solve and graph the solutions of absolute value equations and inequalities with one variable.	Moderate	Lesson 1.3	I					
MA.912.A.3.10	Write an equation of a line given any of the following information: two points on the line, its slope and one point on the line, or its graph. Also, find an equation of a new line parallel to a given line, or perpendicular to a given line, through a given point on the new line.	Moderate	Lessons 1.4, 1.5	I					
MA.912.A.3.14	Solve systems of linear equations and inequalities in two and three variables using graphical, substitution, and elimination methods.	Moderate	Lessons 2.1, 2.2, 2.3, 2.4, 2.5, pages 94-99	I					

MA.912.A.3.15	Solve real-world problems involving systems of linear equations and inequalities in two and three variables.	High	Lessons 2.1, 2.2, 2.3, 2.4, 2.5, pages 94-99	I						
MA.912.A.4.3	Factor polynomial expressions.	Moderate	Lesson 9.2	I						
MA.912.A.4.4	Divide polynomials by monomials and polynomials with various techniques, including synthetic division.	Moderate	Lessons 9.3, 9.4	I						
MA.912.A.4.5	Graph polynomial functions with and without technology and describe end behavior.	Moderate	page 420	M						
MA.912.A.4.6	Use theorems of polynomial behavior (including but not limited to the Fundamental Theorem of Algebra, Remainder Theorem, the Rational Root Theorem, Descartes' Rule of Signs, and the Conjugate Root Theorem) to find the zeros of a polynomial function.	Moderate	Lessons 9.3, 9.4, 9.5	I						
MA.912.A.4.7	Write a polynomial equation for a given set of real and/or complex roots.	Moderate	page 264, page 411 (Exercises 19-22)	M						
MA.912.A.4.8	Describe the relationships among the solutions of an equation, the zeros of a function, the x-intercepts of a graph, and the factors of a polynomial expression with and without technology.	Moderate	Lesson 9.4	M						
MA.912.A.4.9	Use graphing technology to find approximate solutions for polynomial equations.	Low	Lesson 9.4, page 420	M						
MA.912.A.4.10	Use polynomial equations to solve real-world problems.	Moderate	Lesson 9.5, pages 421-425	I						
MA.912.A.5.2	Add, subtract, multiply, and divide rational expressions.	Moderate	Lessons 10.2, 10.3	I						
MA.912.A.5.3	Simplify complex fractions.	Moderate	Lesson 10.5	I						
MA.912.A.5.5	Solve rational equations.	Moderate	Lesson 10.4	I						
MA.912.A.6.2	Add, subtract, multiply, and divide radical expressions (square roots and higher).	Moderate	Lessons 5.1, 5.2, 5.3	I						
MA.912.A.6.3	Simplify expressions using properties of rational exponents.	Low	Lessons 5.1, 5.2, 5.3	I						
MA.912.A.6.4	Convert between rational exponent and radical forms of expressions.	Low	Lesson 5.3	I						
MA.912.A.6.5	Solve equations that contain radical expressions.	Moderate	Lesson 5.4	I						
MA.912.A.7.3	Solve quadratic equations over the real numbers by completing the square.	Moderate	Lesson 6.3	I						
MA.912.A.7.4	Use the discriminant to determine the nature of the roots of a quadratic equation.	Low	Lesson 6.5	I						
MA.912.A.7.5	Solve quadratic equations over the complex number system.	Moderate	Lesson 6.6	I						
MA.912.A.7.6	Identify the axis of symmetry, vertex, domain, range and intercept(s) for a given parabola.	Low	Lesson 7.3	I						
MA.912.A.8.1	Define exponential and logarithmic functions and determine their relationship	Moderate	Lessons 8.1, 8.2	I						
MA.912.A.8.2	Define and use the properties of logarithms to simplify logarithmic expressions and to find their approximate values.	Low	Lesson 8.3, 8.4	I						
MA.912.A.8.3	Graph exponential and logarithmic functions.	Moderate	Lessons 8.1, 8.2	I						
MA.912.A.8.5	Solve logarithmic and exponential equations.	Moderate	Lesson 8.5	I						
MA.912.A.8.6	Use the change of base formula.	Low	Lesson 8.5	I						
MA.912.A.8.7	Solve applications of exponential growth and decay.	High	Lessons 8.1, 8.6, pages 379-385	I						
MA.912.A.10.3	Decide whether a given statement is always, sometimes, or never true (statements involving linear or quadratic expressions, equations, or inequalities, rational or radical expressions, or logarithmic or exponential functions).	High	not explicitly covered							

MA.912.D.11.1	Define arithmetic and geometric sequences and series.	Low	Lessons 11.2, 11.3, 11.4	I						
MA.912.D.11.3	Find specified terms of arithmetic and geometric sequences.	Low	Lessons 11.2, 11.3, 11.4	I						

			Committee Member Evaluation (Committee Member Use Only)				
OVERALL INSTRUCTIONAL QUALITY			IDENTIFY AN EXAMPLE (WITH PAGE NUMBERS OR LOCATION) DEEMED TYPICAL OF THE APPROACH TAKEN IN THE MAJOR TOOL.				
			Strongly Agree	Agree	Disagree	Strongly Disagree	
The major tool introduces and builds mathematical concepts as a coherent whole. It provides opportunities to students to explore why a mathematical idea is important and in which contexts that mathematical idea can be useful. In other words, the major tool helps students learn the mathematics concepts in depth. Additionally, students are given opportunities to connect conceptual knowledge with procedural knowledge and factual knowledge. Overall, there is an appropriate balance of skill development and conceptual understanding.			With each chapter, a Math Applications section is included. This section applies the content learned in the chapter to General Occupations, Agriculture and Agribusiness, Business and Marketing, Family and Consumer Science, Health Occupations, and Industrial Technology. These sections are on pages 46-53, 94-99, 139-147, 188-195, 231-237, 277-281, 330-335, 379-385, 421-425, 464-469, 506-513, 558-563, 600-603, and 635-641				
Tasks are engaging and interesting enough that students want to pursue them. Real world problems are realistic and relevant to students' lives.			Besides the Math Applications sections listed above, each chapter includes a section of Math Labs. Each Math Lab poses a Problem Statement that is applicable to many industries.				
Problem solving is encouraged by the tasks presented to students. Tasks require students to make decisions, determine strategies, and justify solutions.			Specific problem-solving strategies are presented to students in a reoccurring feature. Pages include 26, 70, 133, 164, 220, 250, 301, 345, 416, 449, 490, 540, 594, and 613				
Tasks engage students in communicating mathematical ideas by writing, explaining, drawing, using symbols, talking, listening, and reading for information. Tasks encourage collaboration, discussion, individual accountability, and positive interdependence.			Each lesson's exercises include a section of Think and Discuss questions. Students are encourage to work together on Math Labs in each chapter and use discussions to faciliate the end result of the Math Lab				
Students are given opportunities to create and use representations to organize, record, and communicate their thinking. Tasks promote use of multiple representations and translations among them. Students use a variety of tools to understand a single concept.			Many of the student book examples include a hands-on activity for students to complete. Some examples of this are on pages 174, 202, and 264.				
The mathematics connects to other disciplines such as reading, art, science, and history. Tasks represent mathematical ideas as interconnected and building upon each other.			Exercises in each lesson include topics from a variety of industries and disciplines.				
Tasks require students to make conjectures, justify their thinking, defend their responses by using mathematical arguments, and prove mathematical statements. Students are encouraged to invent and justify solution methods. Students analyze correct and incorrect solution methods.			Students are asked Critical Thinking questions throughout the lessons in the student text. They are asked to justify solution methods as part of traditional lessons such as solving equations.				

MA.912.A.3.Pa.c	Identify quantities to 10 as equal or unequal.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can recognize quantities to 10.					
MA.912.A.3.Pa.d	Sort sets of objects to 10 into groups by quantity.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can recognize quantities to 10.					
MA.912.A.3.Pa.e	Count objects, pictures, or symbols used in a pictograph or chart and identify which category has the largest quantity.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can read bar graphs and pictographs.					
MA.912.A.3.Su.c	Use the concepts of equality and inequality as strategies to solve problems involving real-world situations.	Lessons 1.2, 1.3					
MA.912.A.3.Su.d	Solve equations involving addition and subtraction using visual models, such as a number line, in real-world situations.	Lessons 1.2, 1.3					
MA.912.A.3.Su.e	Identify the mathematical relationship between number pairs in function tables, such as +2 or -3.	Lessons 4.1, 11.1, 11.2					
MA.912.A.3.Su.f	Use function tables and simple pictographs or bar graphs representing equations to make predictions for real-world situations.	Lesson 4.1					
MA.912.A.4.In.c	Combine like and unlike terms in number sentences representing real-world situations.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can combine like terms.					
MA.912.A.4.In.d	Identify factors of expressions with whole numbers by dividing.	Textbook goes beyond the scope of this standard. Students factor algebraic expressions.					
MA.912.A.4.Pa.c	Separate groups of objects to 10 into sets with the same quantity.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can sort quantities to 10.					
MA.912.A.4.Su.c	Identify factors of whole numbers by using division facts.	Textbook goes beyond the scope of this standard. Students factor algebraic expressions.					
MA.912.A.6.In.b	Use factors of perfect squares to solve problems in real-world situations.	Textbook goes beyond the scope of this standard.					
MA.912.A.6.Pa.a	Use one-to-one correspondence to identify equal sets of objects to solve problems.	Textbook goes beyond the scope of this standard.					
MA.912.A.6.Su.a	Use physical models of perfect squares, including 1, 4, 9, 16, 25, and 100, to solve problems.	Textbook goes beyond the scope of this standard.					
MA.912.A.10.In.b	Use estimation strategies, such as rounding, grouping, and comparing, to determine if answers are reasonable.	Students use estimation strategies through problem solving in the textbook.					
MA.912.A.10.Pa.a	Solve real-world problems involving quantities to 10 and match the result to the correct answer to determine accuracy.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can work with quantities greater than 10.					

MA.912.A.10.Su.b	Use resources, such as calculators, to verify accuracy of solutions to problems.	Students solve a variety of problems using graphing calculators, for example pages 19, 30, 60, 136, 166, 229, 245, 367, 376, 416, 420, 459, 534, 575	I				
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**CORRELATION  
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ACCESS POINTS**

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**GRADE LEVEL:** 9-12  
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MA.912.A.2.In.d	Use function tables and simple graphs to determine the mathematical relationship between two numbers representing real-world situations.	Lessons 4.1, 4.2, 4.3, 4.4, 4.5, pages 188-195	I				
MA.912.A.2.Pa.b	Compare sets to 10 of objects, pictures, or symbols using one-to-one correspondence and identify which has more or less.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they can compare numbers to 10.					
MA.912.A.2.Su.c	Identify number patterns and relationships using physical and visual models representing real-world situations.	Lessons 11.1, 11.2, 11.3, 11.4	I				
MA.912.A.3.In.d	Solve equations involving common literal formulas related to real-world situations.	Lesson 2,2	M				
MA.912.A.3.In.e	Solve real-world equations and inequalities with one unknown (variable) using visual models to represent the procedure.	Lessons 1.2, 1.3	I				
MA.912.A.3.In.f	Create function tables and simple graphs that show the mathematical relationship between number pairs.	Lessons 4.1, 4.2, 4.3, 4.4, 4.5, pages 188-195	I				
MA.912.A.3.In.g	Use function tables and simple graphs representing equations to make predictions for real-world situations.	Lessons 4.1, 4.2, 4.3, 4.4, 4.5, pages 188-195	I				
MA.912.A.3.Pa.a	Identify quantities to 9 or more and add 1 more in real-world situations.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they know addition facts to 10.					
MA.912.A.3.Pa.b	Identify quantities to 10 or more and take 1 away in real-world situations.	Textbook goes beyond the scope of this standard. By the time a student reaches Algebra 2, it is assumed they know subtraction facts to 10.					