



**CORRELATION  
SUNSHINE STATE STANDARDS**

**SUBJECT: Algebra Ia**

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**SUBMISSION TITLE: Algebra: Concepts and Applications © 2004**

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**GRADE: Grades 9 to 12 and Adult**

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**STRAND:**

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**STANDARD 1. Demonstrate understanding of the different ways numbers are represented and used in the real world.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.A.1.4.1 associate verbal names, written word names, and standard numerals with integers, rational numbers, irrational numbers, real numbers, <i>and complex numbers</i> .	SE: 4-5, 52-53, 95, 336, 357-358, 362, 364, 374 TWE: 4-5, 52-53, 95, 336, 357-358, 362, 364, 374	<b>I</b>
MA.A.1.4.2 understand the relative size of integers, rational numbers, irrational numbers, and real numbers.	SE: 52–54, 57–58, 63–64, 75, 79, 86, 94–95, 97–98, 109, 127–128, 132, 137, 170, 179, 211, 379 TWE: 52–54, 57–58, 63–64, 75, 79, 86, 94–95, 97–98, 109, 127–128, 132, 137, 170, 179, 211, 379,	<b>I</b>
MA.A.1.4.3 understand concrete and symbolic representations of real <i>and complex</i> numbers in real–world situations.	This objective is addressed throughout the text. See, for example: SE: 2, 50, 53, 92, 138, 186, 218, 236, 282, 334, 346 TWE: 2, 50, 53, 92, 138, 186, 218, 236, 282, 334, 346	<b>I</b>

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.A.1.4.4 understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, absolute value, <i>and logarithms</i> .	<p>This objective is addressed throughout the text. See, for example:</p> <p>SE: 55–56, 65–67, 96–97, 185, 198, 201–202, 217, 353–356, 361, 374–375, 377</p> <p>TWE: 55–56, 65–67, 96–97, 185, 198, 201–202, 217, 353–356, 361, 374–375, 377</p>	<b>I</b>

**STANDARD 2. Demonstrate understanding of number systems.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.A.2.4.2 understand and use the real number system.	<p>This objective is addressed throughout the text. See, for example:</p> <p>SE: 2, 50, 53, 92, 138, 186, 218, 236, 282, 334, 346</p> <p>TWE: 2, 50, 53, 92, 138, 186, 218, 236, 282, 334, 346</p>	<b>I</b>

**STANDARD 3. Demonstrate understanding of the effects of operations on numbers and the relationships among these operations, select appropriate operations, and compute for problem solving.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
<p>MA.A.3.4.1 understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.</p>	<p>This objective is addressed throughout the text. See, for example:</p> <p>SE: 64–65, 67, 87, 76, 82, 88, 90, 234, 321, 336–337, 348, 357–358, 360, 363, 365, 367, 374–375, 379</p> <p>TWE: 64–65, 67, 87, 76, 82, 88, 90, 234, 321, 336–337, 348, 357–358, 360, 363, 365, 367, 374–375, 379</p>	<b>I</b>
<p>MA.A.3.4.2 select and justify alternative strategies, such as using properties of numbers, including inverse, identity, distributive, associative, and transitive, that allow operational shortcuts for computational procedures in real–world or mathematical problems.</p>	<p>SE: 9–10, 12, 14–15, 17, 19, 21, 23, 26, 29, 37, 45, 47, 63, 74, 121, 143, 154–155, 176-177, 207, 249, 323, 325, 337, 354</p> <p>TWE: 9–10, 12, 14–15, 17, 19, 21, 23, 26, 29, 37, 45, 47, 63, 74, 121, 143, 154–155, 176-177, 207, 249, 323, 325, 337, 354</p>	<b>I</b>
<p>MA.A.3.4.3 add, subtract, multiply, and divide real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.</p>	<p>This objective is addressed throughout the text. See, for example:</p> <p>SE: 38, 87, 76, 82, 88, 90, 100, 160, 198, 234, 264, 302, 348, 357–358, 360, 363, 365, 367, 374–375, 379</p> <p>TWE: 38, 87, 76, 82, 88, 90, 100, 160, 198, 234, 264, 302, 348, 357–358, 360, 363, 365, 367, 374–375, 379</p>	<b>I</b>

**STANDARD 4. Use estimation in problem solving and computation.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.A.4.4.1 use estimation strategies in complex situations to predict results and to check the reasonableness of results.	SE: 25, 48, 85, 315, 417, 340, 362, 363–365, 371, 377  TWE: 25, 48, 85, 315, 417, 340, 362, 363–365, 371, 377	<b>I</b>

**STANDARD 5. Measure quantities in the real world and use the measures to solve problems.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.B.1.4.1 use concrete and graphic models to derive formulas for finding perimeter, area, surface area, circumference, and volume of two– and three–dimensional shapes, including rectangular solids, cylinders, cones, and pyramids.	SE: 24, 28, 37, 109, 115, 164, 177, 246, 361, 365, 379  TWE: 24, 28, 37, 109, 115, 164, 177, 246, 361, 365, 379	<b>I</b>
MA.B.1.4.2 use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, <i>and arc lengths</i> .	SE: 164, 235, 266, 361, 364  TWE: 164, 235, 266, 361, 364	<b>I</b>
MA.B.1.4.3 relate the concepts of measurement to similarity and proportionality in real–world situations.	SE: 188, 191–192, 198, 201, 230, 264–265, 267–268, 270, 272, 273–274, 278, 350  TWE: 188, 191–192, 198, 201, 230, 264–265, 267–268, 270, 272, 273–274, 278, 350	<b>I</b>

**STANDARD 6. Compare, contrast, and convert within systems of measurement (both standard/nonstandard and metric/customary).**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.B.2.4.1 select and use direct (measured) and indirect (not measured) methods of measurement as appropriate	This objective is addressed throughout the text. See, for example:  SE: 29, 188, 190, 266, 267, 366  TWE: 29, 188, 190, 266, 267, 366	I
MA.B.2.4.2 solve real-world problems involving rated measures (miles per hour, feet per second).	SE: 29, 39, 190, 205–209, 211, 266, 285  TWE: 29, 39, 190, 205–209, 211, 266, 285	I

**STANDARD 7. Estimate measurements in real-world problem situations.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.B.3.4.1 solve real-world and mathematical problems involving estimates of measurements, including length, time, weight/mass, temperature, money, perimeter, area, and volume and estimate the effects of measurement errors on calculations.	SE: 259, 267, 340, 365, 376  TWE: 259, 267, 340, 365, 376	I

**STANDARD 8. Visualize and illustrate ways in which shapes can be combined, subdivided, and changed.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.C.2.4.1 understand geometric concepts such as perpendicularity, parallelism, <i>tangency</i> , congruency, similarity, <i>reflections</i> , symmetry, and <i>transformations including flips, slides, turns, enlargements, rotations, and fractals</i> .	SE: 69, 77–79, 88, 322, 324–328, 330–331  TWE: 69, 77–79, 88, 322, 324–328, 330–331	I

**STANDARD 9. Use coordinate geometry to locate objects in two dimensions and to describe objects algebraically.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.C.3.4.1 represent and apply geometric properties and relationships to solve real-world and mathematical problems including ratio, proportion, and <i>properties of right triangle trigonometry</i> .	SE: 249, 366, 368–372, 374, 379 TWE: 249, 366, 368–372, 374, 379	I
MA.C.3.4.2 using a rectangular coordinate system (graph), apply and algebraically verify properties of two- and three- dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.	SE: 284–287, 298–301, 309–321, 322, 324–328, 330–331, 387 TWE: 284–287, 298–301, 309–321, 322, 324–328, 330–331, 387	I

**STANDARD 10. Describe, analyze, and generalize a wide variety of patterns, relations, and functions.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.D.1.4.1 describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.	This objective is addressed throughout the text. See, for example: SE: 110-111, 238-240, 243, 244-247, 250-252, 256–263, 269, 276–278, 285-286, 289, 358 TWE: 110-111, 238-240, 243, 244-247, 250-252, 256–263, 269, 276–278, 285-286, 289, 358	I
MA.D.1.4.2 determine the impact when changing parameters of given functions.	SE: 318 TWE: 318	I

**STANDARD 11. Use expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.D.2.4.1 represent real–world problem situations using finite graphs, <i>matrices</i> , <i>sequences</i> , <i>series</i> , and <i>recursive relations</i> .	SE: 80, 110–111, 238-240, 244-247, 302-305, 315 TWE: 80, 110–111, 238-240, 244-247, 302-305, 315	I
MA.D.2.4.2 use <i>systems of equations</i> and inequalities to solve real–world problems graphically, algebraically, and <i>with matrices</i> .	SE: 166, 167, 172, 177, 250, 253, 264, 269, 310-312 TWE: 166, 167, 172, 177, 250, 253, 264, 269, 310-312	I

**STANDARD 12. Demonstrate understanding and use the tools of data analysis for managing information.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.E.1.4.1 interpret data that has been collected, organized, and displayed in charts, tables, and plots.	SE: 38–43, 104–107, 109, 133–135, 158, 185, 210, 283, 302–308, 321, 328–329 TWE: 38–43, 104–107, 109, 133–135, 158, 185, 210, 283, 302–308, 321, 328–329	I
MA.E.1.4.2 calculate measures of central tendency (mean, median, and mode) and dispersion (range, <i>standard deviation</i> and <i>variance</i> ) for complex sets of data and determine the most meaningful measure to describe the data.	SE: 38–43, 104–109, 116, 131, 133–135, 158, 184–185, 209–211, 281 TWE: 38–43, 104–109, 116, 131, 133–135, 158, 184–185, 209–211, 281	I

**STANDARD 13. Use statistical methods to make inferences and valid arguments about real-world situations.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.E.3.4.1 design and perform real-world statistical experiments <i>that involve more than one variable</i> , then analyze results and report findings.	<p>The opportunity to address this objective is available. See the following:</p> <p>SE: 32–37, 38–43, 46, 104–107, 121, 133, 137, 145, 200, 215, 219–223, 233, 308–309, 328–329</p> <p>TWE: 32–37, 38–43, 46, 104–107, 121, 133, 137, 145, 200, 215, 219–223, 233, 308–309, 328–329</p>	<b>M</b>

\*Indepth/Mentioned