



**CORRELATION  
SUNSHINE STATE STANDARDS**

**SUBJECT: Algebra IB**

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

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**PUBLISHER: Glencoe/McGraw–Hill**

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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: 362, 364, 374, 485, 600–601, 611, 619, 623, 630, 633, 673  TWE: 362, 364, 374, 485, 600–601, 611, 619, 623, 630, 633, 673	<b>I</b>
MA.A.1.4.2 understand the relative size of integers, rational numbers, irrational numbers, and real numbers.	SE: 379, 604–605, 633, 673  TWE: 379, 604–605, 633, 673	<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: 334, 346, 380, 418, 456, 488, 502, 548, 591, 598, 600–601, 636, 673  TWE: 334, 346, 380, 418, 456, 488, 502, 548, 591, 598, 600–601, 636, 673	<b>I</b>

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
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: 353–356, 361, 374–375, 377, 425, 539, 622, 688</p> <p>TWE: 353–356, 361, 374–375, 377, 425, 539, 622, 688</p>	<b>I</b>

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

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.A.2.4.1 understand <i>and use</i> the basic concepts of limits and infinity.	<p>SE: 554, 558–559, 563–565, 593, 595, 655</p> <p>TWE: 554, 558–559, 563–565, 593, 595, 655</p>	<b>I</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: 334, 346, 380, 418, 456, 488, 502, 548, 591, 598, 600–601, 636, 673</p> <p>TWE: 334, 346, 380, 418, 456, 488, 502, 548, 591, 598, 600–601, 636, 673</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.3.4.2 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: 337, 341-342, 354, 390-392, 394-396, 399-403, 428-431, 476, 480, 568, 572-574</p> <p>TWE: 337, 341-342, 354, 390-392, 394-396, 399-403, 428-431, 476, 480, 568, 572-574</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: 348, 357-358, 360, 363, 365, 367, 374-375, 379, 479, 580, 629, 656, 680</p> <p>TWE: 348, 357-358, 360, 363, 365, 367, 374-375, 379, 479, 580, 629, 656, 680</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>
<p>MA.A.4.4.1 use estimation strategies in complex situations to predict results and to check the reasonableness of results.</p>	<p>SE: 340, 362, 363-365, 371, 377, 387, 469-470, 485, 580</p> <p>TWE: 340, 362, 363-365, 371, 377, 387, 469-470, 485, 580</p>	<b>I</b>

**STANDARD 5. Demonstrate understanding and apply theories related to numbers.**

BENCHMARK	PAGES(S) OR LOCATIONS(S) WHERE TAUGHT	I/M*
MA.A.5.4.1 apply special number relationships such as sequences <i>and series</i> to real–world problems.	SE: 494–495  TWE: 494–495	I

**STANDARD 6. 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: 340, 365, 376, 485, 532  TWE: 340, 365, 376, 485, 532	I

**STANDARD 7. 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, <i>and properties of right triangle trigonometry</i> .	SE: 366, 368–372, 374, 379, 387, 409, 546, 667, 680–681  TWE: 366, 368–372, 374, 379, 387, 409, 546, 667, 680–681	I
MA.C.3.4.2 using a rectangular coordinate system (graph), apply and algebraically verify properties of two– <i>and three–</i> dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.	SE: 387, 454–455, 508, 555, 562, 607–609, 613, 635, 673  TWE: 387, 454–455, 508, 555, 562, 607–609, 613, 635, 673	I

**STANDARD 8. Describe, analyze, and generalize a wide variety of patterns, relations, and functions.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
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: 358, 393, 425, 454–455, 458–459, 489–490, 496, 649  TWE: 358, 393, 425, 454–455, 458–459, 489–490, 496, 649	<b>I</b>
MA.D.1.4.2 determine the impact when changing parameters of given functions.	SE: 464, 466–467, 473, 499, 585  TWE: 464, 466–467, 473, 499, 585	<b>I</b>

**STANDARD 9. Use expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.D.2.4.1 represent real–world problem situations using finite graphs, matrices, sequences, <i>series</i> , and <i>recursive relations</i> .	SE: 494–495, 578–579  TWE: 494–495, 578–579	<b>I</b>
MA.D.2.4.2 use systems of equations and inequalities to solve real–world problems graphically, algebraically, and <i>with matrices</i> .	SE: 552–553, 557–559, 560, 563–565, 570–571, 573–577, 584–585, 595, 635, 655, 673  TWE: 552–553, 557–559, 560, 563–565, 570–571, 573–577, 584–585, 595, 635, 655, 673	<b>I</b>

**STANDARD 10. Demonstrate understanding and use the tools of data analysis for managing information.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.E.1.4.1 interpret data that has been collected, organized, and displayed in charts, tables, and plots.	SE: 346, 361, 404, 416, 417, 482, 503, 508, 528, 623 TWE: 346, 361, 404, 416, 417, 482, 503, 508, 528, 623	<b>I</b>
MA.E.1.4.2 calculate measures of central tendency (mean, median, and mode) and dispersion (range, <i>standard deviation and variance</i> ) for complex sets of data and determine the most meaningful measure to describe the data.	SE: 613 TWE: 613	<b>I</b>
MA.E.1.4.3 analyze real-world data and make predictions of larger populations by <i>applying formulas to calculate measures of central tendency and dispersion</i> using the sample population data and using appropriate technology, including calculators and computers.	SE: 361, 404, 416, 417 TWE: 361, 404, 416, 417	<b>I</b>

**STANDARD 11. Identify patterns and make predictions from an orderly display of data using concepts of probability and statistics.**

<b>BENCHMARK</b>	<b>PAGES(S) OR LOCATIONS(S) WHERE TAUGHT</b>	<b>I/M*</b>
MA.E.2.4.1 determine probabilities using counting procedures, tables, tree diagrams <i>and formulas for permutations and combinations</i> .	SE: 406-407, 467, 539, 649 TWE: 406-407, 467, 539, 649	<b>I</b>
MA.E.2.4.2 determine the probability for simple and compound events as well as independent and dependent events.	SE: 406-407, 467, 539, 649 TWE: 406-407, 467, 539, 649	<b>I</b>

**STANDARD 12. 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 that involve more than one variable, then analyze results and report findings.	The opportunity to address this objective is available. See the following:  SE: 32–37, 38–43, 46, 104–107, 121, 133, 137, 145, 200, 215, 219–223, 233, 308–309, 328–329  TWE: 32–37, 38–43, 46, 104–107, 121, 133, 137, 145, 200, 215, 219–223, 233, 308–309, 328–329	<b>M</b>
MA.E.3.4.2 explain the limitations of using statistical techniques and data in making inferences and valid arguments.	SE: 35  TWE: 35	<b>I</b>

\*Indepth/Mentioned