CORRELATION
SUNSHINE STATE STANDARDS
& GRADE LEVEL EXPECTATIONS

SUBJECT: M/J Mathematics Series 1, 2, 3

SUBMISSION TITLE: Mathematics: Applications and Concepts – Course 1 ©2004

PUBLISHER: Glencoe

GRADE: 6

STRAND A: Number Sense, Concepts, and Operations

STANDARD 1: The student understands the different ways numbers are represented and used in the real world.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.1.3.1: The student associates verbal names, written word names, and standard numerals with integers, fractions, decimals; number expressed as percents; numbers with exponents; numbers in scientific notation; radicals; absolute value; and ratios. The student:	1. knows word names and standard numerals for whole numbers, fractions, decimals (through hundred-thousandths), and percents.	SE: 102–105, 114, 129, 130, 182–184, 186–190, 211, 213, 215, 586–587 TWE: 102–105, 114, 129, 130, 182–184, 186–190, 211, 213, 215, 586–587	**I**
	2. reads and writes whole numbers and decimals in expanded form.	SE: 103–105, 114, 129, 587 TWE: 103–105, 114, 129, 587	**I**
Benchmark MA.A.1.3.2: The student understands the relative size of integers, fractions, and decimals; numbers expressed as percents; numbers with exponents; numbers in scientific notation; radicals; absolute value; and ratios. The student:	1. compares and orders fractions and decimals using graphic models, number lines, and symbols.	SE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215 TWE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215	**I**
	2. compares and orders fractions, decimals, and common percents.	SE: 400–403, 404–406, 409, 412, 416, 417, 420, 421 TWE: 400–403, 404–406, 409, 412, 416, 417, 420, 421	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.1.3.3: The student understands concrete and symbolic representations of rational numbers and irrational numbers in real-world situations. **The student:**	1. knows examples of positive rational numbers in real-world situations.	The opportunity to address this objective is available. See the following: SE: 395, 398, 400, 401, 402, 403, 404, 406, 407–408, 409, 410, 411, 412, 413–414, 418–420, 421–422 TWE: 395, 398, 400, 401, 402, 403, 404, 406, 407–408, 409, 410, 411, 412, 413–414, 418–420, 421–422	**M**
	2. describes the meanings of positive rational numbers using part/whole relationships and relative size comparisons in real-world situations.	The opportunity to address this objective is available. See the following: SE: 395, 398 TWE: 395, 398	**M**
	3. constructs models to represent positive rational numbers.	The opportunity to address this objective is available. See the following: SE: 395, 398, 400, 401, 402, 403, 404, 406, 407–408, 409, 410, 411, 412, 413–414, 418–420, 421–422 TWE: 395, 398, 400, 401, 402, 403, 404, 406, 407–408, 409, 410, 411, 412, 413–414, 418–420, 421–422	**M**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.1.3.4: The student understands that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, and absolute value. **The student:**	1. knows the relationships among fractions, decimals, and percents.	SE: 202–204, 206–209, 212, 213, 215, 400–403, 404–406, 420, 421 TWE: 202–204, 206–209, 212, 213, 215, 400–403, 404–406, 420, 421	**I**
	2. expresses a given quantity in a variety of ways, such as fractions, decimals, or numbers expressed as percents.	SE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421 TWE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421	**I**
	3. knows whether numbers expressed in different forms are equal.	SE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421 TWE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421	**I**
	4. converts a number expressed in one form to its equivalent in another form.	SE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421 TWE: 108–110, 114, 129, 130, 198–201, 202–205, 206–209, 212, 213, 215, 400–403, 404–406, 409, 412, 416, 417, 420, 421	**I**

*Indepth/Mentioned

STANDARD 2: The student understands number systems.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.2.3.2: The student understands the structure of number systems other than the decimal number system. The student:	1. compares the decimal number system to systems that do not use place value (for example, Roman numeral, ancient Egyptian).	SE: 106–107 TWE: 106–107	**I**

*Indepth/Mentioned

STANDARD 3: The student understands the effects of operations on numbers and the relationships among these operations, selects appropriate operations, and computes for problem solving.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.3.3.1: The student understands and explains the effects of addition, subtraction, multiplication, and division on whole numbers, fractions, including mixed numbers, and decimals, including the inverse relationships of positive and negative numbers. The student: ***(continued on next page)***	1. knows the effects of the four basic operations on whole numbers, fractions, mixed numbers, and decimals.	SE: 101, 121–124, 128, 133, 134, 135–138, 139–140, 141–143, 144–147, 148, 150–151, 152–155, 169, 228–231, 232, 234, 235–238, 239, 240–243, 244–247, 249–250, 251, 252, 259–260, 261–264, 265–267, 268, 270–271, 272–275, 276–279, 285–286, 287, 288–289, 290–291 TWE: 101, 121–124, 128, 133, 134, 135–138, 139–140, 141–143, 144–147, 148, 150–151, 152–155, 169, 228–231, 232, 234, 235–238, 239, 240–243, 244–247, 249–250, 251, 252, 259–260, 261–264, 265–267, 268, 270–271, 272–275, 276–279, 285–286, 287, 288–289, 290–291	**I**
	2. uses models or pictures to show the effects of addition, subtraction, multiplication, and division, on whole numbers, decimals, fractions, and mixed numbers.	SE: 101, 134, 139–140, 144, 150–151, 228–229, 234, 235, 240, 259–260, 261–262, 265, 270–271, 272 TWE: 101, 134, 139–140, 144, 150–151, 228–229, 234, 235, 240, 259–260, 261–262, 265, 270–271, 272	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.3.3.1: The student understands and explains the effects of addition, subtraction, multiplication, and division on whole numbers, fractions, including mixed numbers, and decimals, including the inverse relationships of positive and negative numbers. **The student:** ***(continued from previous page)***	3. knows and applies the commutative, associative, and distributive properties in the addition and multiplication of rational numbers.	SE: 332, 333–336, 342, 348, 370, 373, 374 TWE: 332, 333–336, 342, 348, 370, 373, 374	**I**
	4. uses concrete models and real-world examples to explore the inverse relationship of positive and negative numbers.	SE: 296, 339–342, 343, 344–347, 348, 350–353, 355–357 TWE: 296, 339–342, 343, 344–347, 348, 350–353, 355–357	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.3.3.2: The student selects the appropriate operation to solve problems involving addition, subtraction, multiplication, and division of rational numbers, ratios, proportions, and percents, including the appropriate application of the algebraic order of operations. **The student:**	1. knows the appropriate operations to solve real-world problems involving whole numbers, decimals, and fractions.	This objective is addressed throughout. See, for example: SE: 7, 25, 42, 125–126, 141, 146–147, 171, 238, 243, 250, 278–279, 334, 381, 449, 594 TWE: 7, 25, 42, 125–126, 141, 146–147, 171, 238, 243, 250, 278–279, 334, 381, 449, 594	**I**
	2. solves real-world problems involving whole numbers, fractions, decimals, and common percents using one or two-step problems.	This objective is addressed throughout. See, for example: SE: 25, 42, 125–126, 131, 135, 141, 227, 245, 278–279, 289, 334, 359, 414, 449, 594 TWE: 25, 42, 125–126, 131, 135, 141, 227, 245, 278–279, 289, 334, 359, 414, 449, 594	**I**
	3. applies order of operations when solving problems (parentheses, multiplication, division, addition, and subtraction).	SE: 24–27, 31, 37, 44, 45, 46, 47, 49, 75, 94, 105, 133 TWE: 24–27, 31, 37, 44, 45, 46, 47, 49, 75, 94, 105, 133	**I**
	4. knows proportional relationships and describes such relationships in words, tables, or graphs.	SE: 386–389, 390, 391–393, 394, 398, 439 TWE: 386–389, 390, 391–393, 394, 398, 439	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.3.3.3: The student adds, subtracts, multiplies, and divides whole numbers, decimals, and fractions, including mixed numbers, to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator. **The student:**	1. solves one- or two-step real-world problems involving whole numbers and decimals using appropriate methods of computation (for example, mental computation, paper and pencil, and calculator). 2. justifies the choice of method for calculations, such as mental computation, concrete materials, algorithms, or calculators.	This objective is addressed throughout. See, for example: SE: 7, 33, 42, 126, 157, 193, 227, 281, 315, 347, 348, 359, 414, 449, 489, 521, 569, 594 TWE: 7, 33, 42, 126, 157, 193, 227, 281, 315, 347, 348, 359, 414, 449, 489, 521, 569, 594 SE: 6–7, 9, 32, 125, 126, 156, 192, 226, 280, 314, 358, 413, 448, 488, 520, 568, 594 TWE: 6–7, 9, 32, 125, 126, 156, 192, 226, 280, 314, 358, 413, 448, 488, 520, 568, 594	**I** **I**

*Indepth/Mentioned

STANDARD 4: The student uses estimation in problem solving and computation.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.4.3.1: The student uses estimation strategies to predict results and to check the reasonableness of results. The student:	1. knows an appropriate estimation technique for a given situation using whole numbers (for example, clustering, compatible number, front-end).	SE: 592–593 TWE: 592–593	**I**
	2. estimates to predict results and to check reasonableness of results.	SE: 121–122, 125–126, 129, 131, 144–145, 154–155, 156–157, 223–225, 232, 240, 241, 249, 250, 256–258, 264, 265–266, 268, 277, 285, 287, 592–593 TWE: 121–122, 125–126, 129, 131, 144–145, 154–155, 156–157, 223–225, 232, 240, 241, 249, 250, 256–258, 264, 265–266, 268, 277, 285, 287, 592–593	**I**
	3. determines whether an exact answer is needed or an estimate would be sufficient.	SE: 125–126, 156–157 TWE: 125–126, 156–157	**I**

*Indepth/Mentioned

STANDARD 5: The student understands and applies theories related to numbers.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.A.5.3.1: The student uses concepts about numbers, including primes, factors, and multiples, to build number sequences. The student:	1. knows if numbers (less than or equal to 100) are prime or composite.	SE: 14–17, 21, 22, 45, 46, 47 TWE: 14–17, 21, 22, 45, 46, 47	**I**
	2. finds the greatest common factor and least common multiple of two or more numbers.	SE: 177–180, 185, 189, 190, 194–197, 201, 205, 210, 211, 213, 215 TWE: 177–180, 185, 189, 190, 194–197, 201, 205, 210, 211, 213, 215	**I**
	3. determines the prime factorization of a number less than or equal to 100.	SE: 15–17, 19, 22, 27, 45, 47 TWE: 15–17, 19, 22, 27, 45, 47	**I**
	4. uses divisibility rules.	SE: 10–13, 17, 21, 22, 27, 45, 46, 47 TWE: 10–13, 17, 21, 22, 27, 45, 46, 47	**I**

*Indepth/Mentioned

STRAND B: Measurement

STANDARD 1: The student measures quantities in the real world and uses the measures to solve problems.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.B.1.3.1: The student uses 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 and cylinders. **The student:**	1. uses concrete and graphic models to create formulas for finding perimeter and area.	The opportunity to address this objective is available. See the following: SE: 36, 158, 546, 550, 555, 556, 575 TWE: 36, 158, 546, 550, 555, 556, 575	**M**
	2. uses concrete and graphic models to discover an approximation for π and creates a formula for finding circumference.	The opportunity to address this objective is available. See the following: SE: 161–162 TWE: 161–162	**M**
Benchmark MA.B.1.3.2: The student uses concrete and graphic models to derive formulas for finding rates, distance, time, and angle measures. **The student:**	1. identifies a protractor as a tool for measuring angles and measures angles using a protractor.	SE: 507, 508, 511, 512, 517, 518, 538, 539, 541 TWE: 507, 508, 511, 512, 517, 518, 538, 539, 541	**I**
	2. identifies and names angles according to their measure (including acute, right, obtuse, straight).	SE: 506, 508, 509, 518, 538, 541, 543 TWE: 506, 508, 509, 518, 538, 541, 543	**I**
	3. classifies triangles according to the measurement of their angles and according to the length of their sides.	SE: 523, 526–527 TWE: 523, 526–527	**I**
	4. determines the measure of a missing angle using angle relationships.	SE: 507, 508, 512, 517, 518, 538 TWE: 507, 508, 512, 517, 518, 538	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.B.1.3.3: The student understands and describes how the change of a figure in such dimensions as length, width, height, or radius affects its other measurements such as perimeter, area, surface area, and volume. **The student:**	1. given a two-dimensional figure, creates a new figure by increasing or decreasing the original dimensions.	SE: 394, 464, 469 TWE: 394, 464, 469	**I**
	2. knows the relationship between the area or perimeter of an original figure and that of a newly created figure.	SE: 464, 469 TWE: 464, 469	**I**
	3. solves real-world or mathematical problems involving perimeter or area and how these are affected by changes in the dimensions of the figure.	SE: 41, 45, 159, 160, 164, 464, 469, 548, 549 TWE: 41, 45, 159, 160, 164, 464, 469, 548, 549	**I**
Benchmark MA.B.1.3.4: The student constructs, interprets, and uses scale drawings such as those based on number lines and maps to solve real-world problems. **The student:**	1. knows proportional relationships in scale drawings.	SE: 391–394, 398, 419, 423, 559 TWE: 391–394, 398, 419, 423, 559	**I**
	2. uses scale drawings to solve real-world problems including distance (as in map reading).	SE: 391–394, 398, 419, 423 TWE: 391–394, 398, 419, 423	**I**

*Indepth/Mentioned

STANDARD 2: The student compares, contrasts, and converts within systems of measurement (both standard/nonstandard and metric/customary).

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.B.2.3.1: The student uses direct (measured) and indirect (not measured) measures to compare a given characteristic in either metric or customary units. **The student:**	1. compares objects according to their length, weight or mass, and capacity using customary or metric units.	The opportunity to address this objective is available. See the following: SE: 467, 468, 470, 472, 487, 492 TWE: 467, 468, 470, 472, 487, 492	**M**
	2. measures length, weight or mass, and capacity using appropriate measuring instruments.	SE: 467, 478, 479, 481, 482, 493 TWE: 467, 478, 479, 481, 482, 493	**I**
Benchmark MA.B.2.3.2: The student solves problems involving units of measure and converts answers to a larger or smaller unit within either the metric or customary system. **The student:**	1. changes one customary or metric unit of measurement to another within the same system.	SE: 465–468, 470–473, 474–476, 479, 490–493, 498, 500, 501, 502 TWE: 465–468, 470–473, 474–476, 479, 490–493, 498, 500, 501, 502	**I**
	2. uses concrete manipulatives or constructs models of square units (such as square inch and square meter) for measuring area and cubic units (such as cubic centimeter or cubic yard) for measuring volume.	SE: 39, 464, 546 TWE: 39, 464, 546	**I**

*Indepth/Mentioned

STANDARD 3: The student estimates measurements in real-world problem situations.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.B.3.3.1: The student solves real-world and mathematical problems involving estimates of measurements including length, time, weight/mass, temperature, money, perimeter, area, and volume, in either customary or metric units. **The student:**	1. estimates the measure (length, weight or mass, and capacity) of an object or figure and then compares the estimate with the actual measurement of the object or figure.	SE: 468, 472, 479 TWE: 468, 472, 479	**I**
	2. knows whether an exact answer is needed or an estimate is sufficient.	SE: 481 TWE: 481	**I**
	3. estimates solutions to real-world problems by estimating the length, volume or capacity, weight or mass, perimeter, or area of objects or shapes in either customary or metric units.	SE: 472, 473, 479, 484, 485, 486, 488, 489, 499, 501 TWE: 472, 473, 479, 484, 485, 486, 488, 489, 499, 501	**I**
	4. estimates solutions to real-world problems involving measurement, including estimates of time, temperature and money.	SE: 472, 473, 479, 484, 485, 486, 487, 488, 489, 494, 497, 499, 501 TWE: 472, 473, 479, 484, 485, 486, 487, 488, 489, 494, 497, 499, 501	**I**

*Indepth/Mentioned

STANDARD 4: The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.B.4.3.1: The student selects appropriate units of measurement and determines and applies significant digits in a real-world context. (Significant digits should relate to both instrument precision and to the least precise unit of measurement). **The student:**	1. selects the appropriate unit of measure for a given real-world situation.	SE: 472, 475, 476, 477, 478, 480–481, 482, 485, 486, 487, 499, 501 TWE: 472, 475, 476, 477, 478, 480–481, 482, 485, 486, 487, 499, 501	**I**
	2. knows the approximate nature of measurement and measures to the specified degree of accuracy (for example, nearest centimeter or sixteenth of an inch).	SE: 480–481 TWE: 480–481	**I**
Benchmark MA.B.4.3.2: The student selects and uses appropriate instruments, technology, and techniques to measure quantities in order to achieve specified degrees of accuracy in a problem situation. **The student:**	1. selects an appropriate measurement tool (for example, scales, rulers, thermometers, measuring cups, protractors, gauges).	SE: 467, 478, 479, 481, 482, 493, 507, 512, 518, 525, 538, 539, 541 TWE: 467, 478, 479, 481, 482, 493, 507, 512, 518, 525, 538, 539, 541	**I**
	2. determines the interval of a scale and reads the scales on a variety of measuring instruments.	The opportunity to address this objective is available. See the following: SE: 465, 466, 474, 476, 479, 480–481, 498, 507, 538, 539 TWE: 465, 466, 474, 476, 479, 480–481, 498, 507, 538, 539	**M**
	3. measures accurately with the measurement tools.	SE: 467, 478, 479, 481, 482, 493, 507 TWE: 467, 478, 479, 481, 482, 493, 507	**I**

*Indepth/Mentioned

STRAND C: Geometry and Spatial Sense

STANDARD 1: The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.C.1.3.1: The student understands the basic properties of, and relationships pertaining to, regular and irregular geometric shapes in two and three dimensions. **The student:** ***(continued on next page)***	1. identifies, draws, and uses symbolic notation to denote the attributes of two-dimensional geometric figures (including points, parallel and perpendicular lines, planes, rays, and parts of a circle).	SE: 506–509, 510–512, 513–514, 515–517, 518, 520–521, 522–525, 526–527, 528–531, 532–533, 534–536, 537, 538–540, 541, 542–543 TWE: 506–509, 510–512, 513–514, 515–517, 518, 520–521, 522–525, 526–527, 528–531, 532–533, 534–536, 537, 538–540, 541, 542–543	**I**
	2. knows and draws angles (including acute, obtuse, right, and straight).	SE: 506–509, 512, 518, 525, 538, 539, 541 TWE: 506–509, 512, 518, 525, 538, 539, 541	**I**
	3. analyzes relationships among two-dimensional geometric figures (for example, the diagonal of a rectangle divides the rectangle into two congruent triangles each having one half the area of the rectangle).	SE: 523–525, 526–527, 534–536, 541, 546–547, 549, 550, 551, 554, 555, 562, 582 TWE: 523–525, 526–527, 534–536, 541, 546–547, 549, 550, 551, 554, 555, 562, 582	**I**
	4. uses appropriate measuring devices (including ruler and protractor) as needed in analysis of figures.	SE: 526 TWE: 526	**I**
	5. knows the attributes of and draws three-dimensional figures (including rectangular solids and cylinders).	SE: 564–566, 567, 570–573, 574, 575–578, 579–580, 581, 582 TWE: 564–566, 567, 570–573, 574, 575–578, 579–580, 581, 582	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.C.1.3.1: The student understands the basic properties of, and relationships pertaining to, regular and irregular geometric shapes in two and three dimensions. **The student:** ***(continued from previous page)***	6. knows the properties of two- and three-dimensional figures.	SE: 522–525, 526–527, 528–531, 532–533, 534–536, 539–540, 541, 549, 554 TWE: 522–525, 526–527, 528–531, 532–533, 534–536, 539–540, 541, 549, 554	**I**

*Indepth/Mentioned

STANDARD 2: The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.C.2.3.1: The student understands the geometric concepts of symmetry, reflections, congruency, similarity, perpendicularity, parallelism, and transformations, including flips, slides, turns, and enlargements. **The student:**	1. uses manipulatives and drawings to solve problems requiring spatial visualization.	SE: 520–521, 528, 530, 532–533, 540, 543, 568–569 TWE: 520–521, 528, 530, 532–533, 540, 543, 568–569	**I**
	2. describes and applies the property of symmetry in figures.	SE: 528–531, 536, 540 TWE: 528–531, 536, 540	**I**
	3. recognizes and draws congruent and similar figures.	SE: 534–536, 540, 541 TWE: 534–536, 540, 541	**I**
	4. identifies and performs the various transformations (reflection, translation, rotation) of a given figure on a coordinate plane.	SE: 532–533 TWE: 532–533	**I**

*Indepth/Mentioned

STANDARD 3: The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.C.3.3.1: The student represents and applies geometric properties and relationships to solve real-world and mathematical problems. The student:	1. observes, explains, and makes conjectures regarding geometric properties and relationships (among angles, triangles, squares, rectangles, parallelograms).	SE: 523–525, 526–527, 534–536, 541, 546–547, 549, 550, 551, 554, 555, 562, 582 TWE: 523–525, 526–527, 534–536, 541, 546–547, 549, 550, 551, 554, 555, 562, 582	**I**
	2. applies known geometric properties (for example, symmetry, congruence) to solve real-world and mathematical problems.	SE: 329, 520–521, 524, 534–536, 540, 541, 547, 553, 554, 557, 558, 562, 568–569, 571, 581 TWE: 329, 520–521, 524, 534–536, 540, 541, 547, 553, 554, 557, 558, 562, 568–569, 571, 581	**I**
Benchmark MA.C.3.3.2: The student identifies and plots ordered pairs in all four quadrants of a rectangular coordinate system (graph) and applies simple properties of lines. The student:	1. identifies the x and y axes in a coordinate plane and identifies the coordinates of a given point in the first quadrant.	SE: 320–323, 326, 329 TWE: 320–323, 326, 329	**I**
	2. plots specific points in the first quadrant of the Cartesian coordinate system.	SE: 321–323, 326, 329 TWE: 321–323, 326, 329	**I**

*Indepth/Mentioned

STRAND D: Algebraic Thinking

STANDARD 1: The student describes, analyzes, and generalizes a wide variety of patterns, relations and functions.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.D.1.3.1: The student describes a wide variety of patterns, relationships, and functions through models, such as manipulatives, tables, graphs, expressions, equations, and inequalities. The student:	1. describes, predicts, and creates numerical and geometric patterns through models (for example, manipulatives, tables, graphs).	SE: 8, 9, 10 TWE: 8, 9, 10	**I**
	2. states in words a rule for a pattern.	SE: 8, 10, 363, 364, 365, 373, 374 TWE: 8, 10, 363, 364, 365, 373, 374	**I**
	3. predicts outcomes based on patterns.	SE: 8, 9, 10–13, 43, 45 TWE: 8, 9, 10–13, 43, 45	**I**
	4. finds patterns in real-world situations.	SE: 8, 9, 12, 13 TWE: 8, 9, 12, 13	**I**
	5. describes relationships and patterns using words, tables, symbols, variables, expressions, or equations.	SE: 8, 9, 10–13 TWE: 8, 9, 10–13	**I**
	6. given initial terms in a pattern, supplies a specific missing term in the pattern (for example, given first four terms, supplies sixth term).	SE: 8, 9, 10, 12, 13, 33, 359 TWE: 8, 9, 10, 12, 13, 33, 359	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.D.1.3.2: The student creates and interprets tables, graphs, equations, and verbal descriptions to explain cause-and-effect relationships. The student:	1. interprets and creates function tables and graphs (first quadrant).	SE: 360–361, 362–365, 366–369, 372, 373, 374, 375 TWE: 360–361, 362–365, 366–369, 372, 373, 374, 375	**I**
	2. substitutes values for variables in expressions and describes the results or patterns observed.	SE: 361–365, 367, 368, 369, 372, 373, 374 TWE: 361–365, 367, 368, 369, 372, 373, 374	**I**
	3. graphs (first quadrant) functions from function tables to explain cause-and-effect relationships.	SE: 366–369, 372, 373, 375 TWE: 366–369, 372, 373, 375	**I**

*Indepth/Mentioned

STANDARD 2: The student uses expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.D.2.3.1: The student represents and solves real-world problems graphically, with algebraic expressions, equations, and inequalities. The student:	1. uses variables to represent numbers and relationships.	SE: 28–31, 34–37, 42, 44, 45, 46, 337–338, 339–342, 344–348, 349, 350–353 TWE: 28–31, 34–37, 42, 44, 45, 46, 337–338, 339–342, 344–348, 349, 350–353	**I**
	2. translates verbal expressions into algebraic expressions.	SE: 28, 34 TWE: 28, 34	**I**
	3. translates simple algebraic expressions, equations or formulas representing real-world relationships into verbal expressions or sentences.	SE: 28, 34 TWE: 28, 34	**I**
	4. uses pictures, models, manipulatives or other strategies to solve simple one-step linear equations with rational solutions.	SE: 34–37, 44, 45, 337–338, 339–341, 343, 344–347, 348, 350–353 TWE: 34–37, 44, 45, 337–338, 339–341, 343, 344–347, 348, 350–353	**I**
Benchmark MA.D.2.3.2: The student uses algebraic problem-solving strategies to solve real-world problems involving linear equations and inequalities. The student:	1. knows how to solve simple equations representing real-world situations, using pictures, models, manipulatives (such as algebra tiles), or other strategies.	SE: 37, 341, 344–347, 348, 349, 350, 352 TWE: 37, 341, 344–347, 348, 349, 350, 352	**I**
	2. uses concrete materials to solve equations and explains reasoning orally or in writing.	The opportunity to address this objective is available. See the following: SE: 37, 338, 341, 344, 346, 348, 350, 352 TWE: 37, 338, 341, 344, 346, 348, 350, 352	**M**

*Indepth/Mentioned

STRAND E: Data Analysis and Probability

STANDARD 1: The student understands and uses the tools of data analysis for managing information.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.E.1.3.1: The student collects, organizes, and displays data in a variety of forms, including tables, line graphs, charts, bar graphs, to determine how different ways of presenting data can lead to different interpretations. The student:	1. reads and analyzes data displayed in a variety of forms (charts, pictographs, stem-and-leaf plots).	SE: 50–53, 54–55, 56–59, 60–61, 62–65, 66–69, 70, 72–75, 83, 84–85, 86–89, 90–92, 93, 94–95 TWE: 50–53, 54–55, 56–59, 60–61, 62–65, 66–69, 70, 72–75, 83, 84–85, 86–89, 90–92, 93, 94–95	**I**
	2. generates and collects data for analysis.	SE: 3, 61, 62, 71, 85, 88, 89 TWE: 3, 61, 62, 71, 85, 88, 89	**I**
	3. chooses appropriate titles, scales, labels, keys, and intervals for displaying data in graphs.	SE: 50–53, 57–59, 60–61, 62, 65, 68, 69, 70, 71, 72–75, 85, 88, 90, 91 TWE: 50–53, 57–59, 60–61, 62, 65, 68, 69, 70, 71, 72–75, 85, 88, 90, 91	**I**
	4. constructs, interprets, and explains displays of data, such as tables and graphs (single- and multiple-bar graphs and single- and multiple- line graphs).	SE: 57–59, 60–61, 62, 65, 68, 69, 70, 71, 72–75, 85, 88, 89, 90, 91, 92, 93 TWE: 57–59, 60–61, 62, 65, 68, 69, 70, 71, 72–75, 85, 88, 89, 90, 91, 92, 93	**I**

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.E.1.3.2: The student understands and applies the concepts of range and central tendency (mean, median, and mode). **The student:**	1. organizes items in a set of data.	SE: 56–59, 60–61, 62, 65, 68, 69, 70, 72–75, 84, 88, 90, 91, 92, 93 TWE: 56–59, 60–61, 62, 65, 68, 69, 70, 72–75, 84, 88, 90, 91, 92, 93	**I**
	2. finds the range, mean, median, and mode of a set of data.	SE: 76–78, 79, 80–83, 88, 89, 92, 93, 95 TWE: 76–78, 79, 80–83, 88, 89, 92, 93, 95	**I**
	3. describes real-world data by applying and explaining appropriate procedures for finding measures of central tendency.	SE: 76–78, 79, 80–83, 84–85, 87, 88, 89, 93 TWE: 76–78, 79, 80–83, 84–85, 87, 88, 89, 93	**I**
Benchmark MA.E.1.3.3: The student analyzes real-world data by applying appropriate formulas for measures of central tendency and organizing data in a quality display, using appropriate technology, including calculators and computers. **The student:**	1. describes a set of data by using the measures of central tendency.	SE: 76–78, 79, 80–83, 84–85, 87, 88, 89, 93 TWE: 76–78, 79, 80–83, 84–85, 87, 88, 89, 93	**I**
	2. uses technology, such as graphing calculators and computer spreadsheets, to create graphs.	SE: 3, 60–61, 79, 84–85, 89 TWE: 3, 60–61, 79, 84–85, 89	**I**

*Indepth/Mentioned

STANDARD 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.

BENCHMARK	GRADE LEVEL EXPECTATIONS	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
Benchmark MA.E.2.3.1: The student compares experimental results with mathematical expectations of probabilities. **The student:**	1. determines all possible outcomes of an event using a tree diagram or organized list.	SE: 426–427, 433–436, 442, 443, 448–449, 455 TWE: 426–427, 433–436, 442, 443, 448–449, 455	**I**
	2. calculates simple mathematical probabilities.	SE: 426–427, 428–431, 432, 434, 435, 436, 442, 444–447, 450–453, 454–456, 457, 458, 459 TWE: 426–427, 428–431, 432, 434, 435, 436, 442, 444–447, 450–453, 454–456, 457, 458, 459	**I**
	3. uses manipulatives to obtain experimental results, compares results to mathematical expectations, and discusses the validity of the experiment.	SE: 426–427, 432 TWE: 426–427, 432	**I**
Benchmark MA.E.2.3.2: The student determines odds for and odds against a given situation. **The student:**	1. examines and describes situations that include finding the odds for and against a specified outcome.	SE: 431 TWE: 431	**I**

*Indepth/Mentioned