

Core Content	Supporting Books
<p>MA-05-1.1.1 Students will:</p> <ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999,999); • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly-used fractions, mixed numbers and decimals through thousandths; • apply these numbers to represent real-world problems and • explain how the base-10 number system relates to place value. 	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>Schwartz, D. (1998). <i>G is for googol</i>. Berkeley, CA: Tricycle Press.</p> <p>Schwartz, D. (1985). <i>How much is a million?</i> New York: Lothrop, Lee & Shepard Books.</p> <p>Schwartz, D. (1999). <i>On beyond a million</i>. New York: Random House.</p>
<p><i>MA-05-1.1.2</i> <i>Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.</i></p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>Walsh, K. (2006). <i>Space math</i>. Vero Beach, FL: Rourke Publishing.</p> <p>Walsh, K. (2006). <i>Sports math</i>. Vero Beach, FL: Rourke Publishing.</p>
<p>MA-05-1.1.3 Students will compare (<, >, =) and order whole numbers, fractions and decimals, and explain the relationships (equivalence, order) between and among them.</p>	<p>Long, L. (2001). <i>Fabulous fractions</i>. New York: John Wiley & Sons, Inc.</p> <p>Schwartz, D. (1985). <i>How much is a million?</i> New York: Lothrop, Lee & Shepard Books.</p>
<p>MA-05-1.2.1 Students will apply and describe appropriate strategies for estimating quantities of objects and computational results in real-world problems.</p>	<p>Wingard-Nelson, R. (2005). <i>Word problems made easy</i>. Berkeley Heights, NJ: 07922.</p>
<p>MA-05-1.3.1 Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations</p>	<p>Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p>

<p>to solve real-world problems with the following constraints:</p> <ul style="list-style-type: none"> • add, subtract, multiply, and divide whole numbers (less than 100,000,000), using technology where appropriate; • add and subtract fractions with like denominators through 16, with sums less than or equal to one and • add and subtract decimals through hundredths. 	<p>Long, L. (2001). <i>Fabulous fractions</i>. New York: John Wiley & Sons, Inc.</p> <p>Long, L. (2000). <i>Marvelous multiplication</i>. New York: John Wiley & Sons, Inc.</p> <p>Walsh, K. (2006). <i>Construction math</i>. Vero Beach, FL: Rourke Publishing.</p> <p>Walsh, K. (2006). <i>Music math</i>. Vero Beach, FL: Rourke Publishing.</p> <p>Walsh, K. (2006). <i>Space math</i>. Vero Beach, FL: Rourke Publishing.</p> <p>Walsh, K. (2006). <i>Sports math</i>. Vero Beach, FL: Rourke Publishing.</p> <p>Wingard-Nelson, R. (2005). <i>Division made easy</i>. Berkeley Heights, NJ: Enslow Publishers, Inc.</p> <p>Wingard-Nelson, R. (2005). <i>Fractions & decimals made easy</i>. Berkeley Heights, NJ: Enslow Publishers, Inc.</p> <p>Wingard-Nelson, R. (2005). <i>Word problems made easy</i>. Berkeley Heights, NJ: 07922.</p> <p>Wise, B. (2001). <i>Whodunit math puzzles</i>. New York: Sterling Publishing Co., Inc.</p>
<p>MA-05-1.3.2 <i>Students will skip-count forward and backward.</i></p>	<p>Long, L. (2000). <i>Marvelous multiplication</i>. New York: John Wiley & Sons, Inc.</p>
<p>MA-05-1.3.3 <i>Students will multiply decimals through tenths.</i></p>	<p>Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p>

	<p>Wise, B. (2001). <i>Whodunit math puzzles</i>. New York: Sterling Publishing Co., Inc.</p>
<p>MA-05-1.5.1 Students will identify and determine composite numbers, prime numbers, multiples of a number, factors of a number and least common multiples (LCM), and will apply these numbers to solve real-world problems.</p>	<p>Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p> <p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>Wise, B. (2001). <i>Whodunit math puzzles</i>. New York: Sterling Publishing Co., Inc.</p>
<p><i>MA-05-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i></p>	<p>Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p> <p>Long, L. (2000). <i>Marvelous multiplication</i>. New York: John Wiley & Sons, Inc.</p>
<p>MA-05-2.1.1 Students will apply standard units to measure length (to the nearest eighth-inch or the nearest centimeter) and to determine:</p> <ul style="list-style-type: none"> • weight (ounce, pound; gram, kilogram); • perimeter; • area (figures that can be divided into rectangular shapes); • time (nearest minute); • temperature (Fahrenheit and Celsius) and • angle measures (nearest degree). 	
<p><i>MA-05-2.1.2</i> <i>Students will choose and use appropriate tools (e.g., protractor, meter stick, ruler) for specific tasks and apply skills to solve real-world and mathematical problems.</i></p>	

<p>MA-05-2.1.3 <i>Students will use measurements to identify, describe, sort and compare attributes of objects and apply these to solve real-world and mathematical problems.</i></p>	<p>Harris, N. (2004). <i>How tall?</i> Farmington Hills, MI: Blackbirch Press.</p>
<p>MA-05-2.1.4 <i>Students will measure volume of rectangular prisms, liquid capacity, and money using standard units and apply these skills to solve real-world and mathematical problems.</i></p>	<p>Wise, B. (2001). <i>Whodunit math puzzles</i>. New York: Sterling Publishing Co., Inc.</p>
<p>MA-05-2.1.6 Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</p>	<p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p>
<p>MA-05-2.2.1 Students will determine elapsed time.</p>	<p>Wise, B. (2001). <i>Whodunit math puzzles</i>. New York: Sterling Publishing Co., Inc.</p>
<p>MA-05-2.2.2 <i>Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement.</i></p>	
<p>MA-05-2.2.3 Students will convert units within the same measurement system [U.S. customary (inches, feet, yards, miles; ounces, pounds, tons), metric (millimeters, centimeters, meters, kilometers; grams, kilograms), money, or time] and use the units to solve problems.</p>	<p>Walsh, K. (2006). <i>Time math</i>. Vero Beach, FL: Rourke Publishing, LLC.</p>
<p>MA-05-3.1.1 Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices, radius, diameter] and will apply these elements to solve real-world and</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc. Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p>

<p>mathematical problems.</p>	<p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p> <p>Neuschwander, C. (2000). <i>Sir Cumference and the dragon of Pi</i>. New York: Scholastic, Inc.</p>
<p>MA-05-3.1.2 Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), all quadrilaterals, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems.</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p>
<p>MA-05-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms), will identify three-dimensional objects from two-dimensional representations (nets) and will apply the attributes to solve real-world and mathematical problems.</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p>
<p>MA-05-3.1.5 Students will identify and describe congruent and similar figures in real-world and mathematical problems.</p>	<p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p>
<p>MA-05-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply line symmetry to construct a geometric design.</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p>
<p>MA-05-3.2.2 Students will identify 90° rotations, reflections or translations of basic shapes within a plane.</p>	<p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p>

<p>MA-05-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system scaled by ones, twos, threes, fives or tens; locate points on a grid; and apply graphing in the coordinate system to solve real-world problems.</p>	<p>Markle, S. (1997). <i>Discovering graph secrets</i>. New York: Atheneum Books for Young Readers.</p> <p>The Math Forum (2005). <i>Dr. Math introduces geometry</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p>
<p>MA-05-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs).</p>	<p>Markle, S. (1997). <i>Discovering graph secrets</i>. New York: Atheneum Books for Young Readers.</p> <p>Wingard-Nelson, R. (2005). <i>Word problems made easy</i>. Berkeley Heights, NJ: 07922.</p>
<p><i>MA-05-4.1.2</i> <i>Students will collect data (e.g., tallies, surveys) and explain how the skills apply in real-world and mathematical problems.</i></p>	<p>Markle, S. (1997). <i>Discovering graph secrets</i>. New York: Atheneum Books for Young Readers.</p>
<p>MA-05-4.1.3 Students will construct data displays (pictographs, bar graphs, line plots, line graphs, Venn diagrams, tables).</p>	<p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p> <p>Wingard-Nelson, R. (2005). <i>Word problems made easy</i>. Berkeley Heights, NJ: 07922.</p>
<p>MA-05-4.2.1 Students will determine and apply the mean, median, mode and range of a set of data.</p>	
<p><i>MA-05-4.3.1</i> <i>Students will describe and give examples of the process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer questions).</i></p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Enzenberger, H. (1997). <i>Number devil</i>. New York: Metropolitan Books.</p> <p>Maganzini, C. (1997). <i>Cool math</i>. New York: Price Stern Sloan, Inc.</p>
<p>MA-05-4.4.1 Students will determine all possible outcomes of an activity/event with up</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p>

<p>to 12 possible outcomes.</p>	
<p>MA-05-4.4.2 Students will determine the likelihood of an event and the probability of an event (expressed as a fraction).</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Enzenberger, H. (1997). <i>Number devil.</i> New York: Metropolitan Books.</p> <p>Maganzini, C. (1997). <i>Cool math.</i> New York: Price Stern Sloan, Inc.</p>
<p>MA-05-5.1.1 Students will extend patterns, find the missing term(s) in a pattern or describe rules for patterns (numbers, pictures, tables, words) from real-world and mathematical problems.</p>	<p>Ball, J. (2005). <i>Go figure!</i> New York: DK Publishing, Inc.</p> <p>Demi (1997). <i>One grain of rice.</i> New York: Scholastic, Inc</p> <p>Enzenberger, H. (1997). <i>Number devil.</i> New York: Metropolitan Books.</p> <p>Maganzini, C. (1997). <i>Cool math.</i> New York: Price Stern Sloan, Inc.</p>
<p>MA-05-5.1.2 Students will describe functions (input-output) through pictures, tables, or words and will construct tables to analyze functions based on real-world or mathematical problems.</p>	
<p>MA-05-5.1.3 Students will determine an output value or an input value for a function rule given the other value.</p>	
<p>MA-05-5.2.1 Students will model verbal descriptions of real-world and mathematical problems using a variable or a missing value in an expression.</p>	<p>Enzenberger, H. (1997). <i>Number devil.</i> New York: Metropolitan Books.</p>
<p>MA-05-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or missing</p>	<p>Enzenberger, H. (1997). <i>Number devil.</i> New York: Metropolitan Books.</p>

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value (e.g., $4 = 2 \times N$, $__ + 5 > 14$) and apply simple number sentences to solve mathematical and real-world problems.

Schwartz, D. (1999). *On beyond a million*. New York: Random House.

Wingard-Nelson, R. (2005). *Word problems made easy*. Berkeley Heights, NJ: 07922.