

Florida 5th Grade Assessment Item Specification Report

Benchmark number	Benchmark	Content Limits
MA.5.A.1.1#:	Describe the process of finding quotients involving multi-digit dividends using models, place value, properties, and the relationship of division to multiplication.	<p>Items may include one-digit or two-digit divisors and dividends of up to four digits.</p> <p>Items will not include quotients with remainders.</p>
MA.5.A.1.2#:	Estimate quotients or calculate them mentally depending on the context and numbers involved.	Assessed with MA.5.A.1.4
MA.5.A.1.3#:	Interpret solutions to division situations including those with remainders depending on the context of the problem.	Assessed with MA.5.A.1.4
MA.5.A.1.4#:	Divide multi-digit whole numbers fluently, including solving real-world problems, demonstrating understanding of the standard algorithm and checking the reasonableness of results.	<p>Divisors may have up to two digits and dividends may have up to four digits.</p> <p>Dividends may have up to four digits representing dollars and may include two zeroes representing cents (e.g., $\\$372.00 \div 24$).</p> <p>Decimals in the context of money may be used only for the dividend or quotient.</p> <p>Items may require the use of two operations to solve the problem if at least one operation is division.</p>

<p>MA.5.A.2.1#:</p>	<p>Represent addition and subtraction of decimals and fractions with like and unlike denominators using models, place value, or properties.</p>	<p>Items may include graphic representations of models.</p> <p>Items may include decimals through the thousandths place or in the context of money.</p> <p>Items may assess the commutative and/or associative properties.</p> <p>Denominators of fractions in the stimulus must be less than or equal to 12.</p> <p>Items may include mixed numbers and/or fractions.</p> <p>Items may include fractions represented as parts of sets (e.g., $\frac{1}{2}$ dozen + $\frac{1}{3}$ dozen).</p> <p>Regrouping in subtraction problems or finding a mixed number may be included.</p> <p>Items will not include more than three addends.</p> <p>Students may be required to apply concepts from MA.5.A.6.1, but this benchmark will not be assessed in isolation.</p>
<p>MA.5.A.2.2#:</p>	<p>Add and subtract fractions and decimals fluently, and verify the reasonableness of results, including in problem situations.</p>	<p>Items may include up to two mixed numbers.</p> <p>Items may include up to three fractions, which may contain unlike denominators.</p> <p>Denominators of fractions may be 1–12, 14, 15, 16, 18, 21, 24, 25, 32, 35, 36, 45, 75, or any multiple of 10 through 100.</p> <p>Items may include decimals through the thousandths place or in money.</p> <p>Fractions and decimals may not be used in the same item.</p>
<p>MA.5.A.2.3#:</p>	<p>Make reasonable estimates of fraction and decimal sums and differences, and use techniques for rounding.</p>	<p>Assessed with MA.5.A.2.2</p>

<p>MA.5.A.2.4#:</p>	<p>Determine the prime factorization of numbers.</p>	<p>Expressions with a base of 2, 3, or 4 may have exponents up to 5, 4, or 3 respectively.</p> <p>Expressions with a base of 5 through 10 may be raised to the second power.</p> <p>Items will not include factoring numbers greater than 100.</p>
<p>MA.5.A.4.1#:</p>	<p>Use the properties of equality to solve numerical and real world situations.</p>	<p>Problems may involve equalities that have no more than two operations.</p> <p>Properties of equality may include substituting a quantity of equal value for another quantity within a situation.</p> <p>Equations may have up to two variables. When a two-variable equation is given in the stem, the value of one of the variables must be provided. (Students are not expected to solve for two variables.)</p> <p>Coefficients of variables must be whole numbers.</p> <p>Items will not include naming the property of equality.</p> <p>Numbers used in situations and their solutions must be whole numbers less than or equal to 150.</p>
<p>MA.5.A.4.2#:</p>	<p>Construct and describe a graph showing continuous data, such as a graph of a quantity that changes over time.</p>	<p>Assessed with MA.5.S.7.1 and MA.5.S.7.2</p>
<p>MA.5.A.6.1#:</p>	<p>Identify and relate prime and composite numbers, factors, and multiples within the context of fractions.</p>	<p>Assessed with MA.5.A.2.2 and MA.5.A.2.4</p>

<p>MA.5.A.6.2#:</p>	<p>Use the order of operations to simplify expressions which include exponents and parentheses.</p>	<p>Items will include no more than five whole numbers (including exponents) within the expression.</p> <p>Numbers raised to a power must be single-digit numbers.</p> <p>Exponents may not be applied to the entire quantity within parentheses.</p> <p>Exponents used on numbers must be either 2 or 3.</p> <p>Division will not be shown as a fraction.</p>
<p>MA.5.A.6.3#:</p>	<p>Describe real-world situations using positive and negative numbers.</p>	<p>Items may include integers from -500 to 500</p>
<p>MA.5.A.6.4#:</p>	<p>Compare, order, and graph integers, including integers shown on a number line.</p>	<p>Items may include integers from -500 through 500.</p> <p>Items may include the inequality symbols ($>$, $<$, \leq, \geq, \neq).</p> <p>Items will not include compound inequalities.</p> <p>Items will not include timelines (years).</p>
<p>MA.5.A.6.5#:</p>	<p>Solve non-routine problems using various strategies including “solving a simpler problem” and “guess, check, and revise”.</p>	<p>Items may include multistep problems with no more than three operations.</p> <p>Items may include concepts from other benchmarks within the Number and Operations strands.</p> <p>Students should be able to choose their own strategies to solve the problems.</p>

<p>MA.5.G.3.1#:</p>	<p>Analyze and compare the properties of two-dimensional figures and three-dimensional solids (polyhedra), including the number of edges, faces, vertices, and types of faces.</p>	<p>Items may include the following terms: pyramid, prism, solid, face, edge, vertex, net, right, polyhedron, and vocabulary from previous grades.</p> <p>Items will not include assessing properties of two-dimensional figures in isolation; items must include a three-dimensional figure.</p> <p>Polyhedra used in items must be prisms or pyramids with bases having no more than eight sides or composite three-dimensional figures constructed from only cubes.</p> <p>Items dealing with composite three-dimensional solids will not require students to determine the number of edges, sides, or faces; however, students may be asked to identify different views of the solid or the number of cubes used to build the solid.</p> <p>Items will not assess vocabulary or properties of oblique polyhedrons, spheres, cones, or cylinders.</p>
<p>MA.5.G.3.2#:</p>	<p>Describe, define, and determine surface area and volume of prisms by using appropriate units and selecting strategies and tools.</p>	<p>Dimensions of prisms must be whole numbers no larger than 12, or the surface area or calculated volume must be less than 1,000.</p> <p>Items will not include volume and surface areas of nonrectangular prisms (e.g., triangular prisms).</p> <p>Items involving surface area must include a net or a graphic of the assessed three-dimensional shape.</p>
<p>MA.5.G.5.1#:</p>	<p>Identify and plot ordered pairs on the first quadrant of the coordinate plane.</p>	<p>Items may include the following terms: <i>coordinates</i>, <i>coordinate plane</i>, <i>ordered pairs</i>, <i>midpoint</i>, <i>x-axis</i>, and <i>y-axis</i>, but items will not assess the vocabulary of these terms.</p>

<p>MA.5.G.5.2#:</p>	<p>Compare, contrast, and convert units of measure within the same dimension (length, mass, or time) to solve problems.</p>	<p>Items may include linear measure, weight/mass, time, or elapsed time (to the nearest minute).</p> <p>Items will not include time zones.</p> <p>Items may include either analog or digital clocks but not both within the same item.</p> <p>Items will not include the use of proportions or equivalent ratios to convert between different measurement systems.</p> <p>Items may include up to two conversions within the same system of measurement.</p> <p>Items may include multiplying or dividing by multiples of ten.</p> <p>Items involving the metric system may include decimals.</p> <p>Items may require students to add and subtract measurements.</p>
<p>MA.5.G.5.3#:</p>	<p>Solve problems requiring attention to approximation, selection of appropriate measuring tools, and precision of measurement.</p>	<p>Linear measures in inches may be to the nearest $\frac{1}{16}$ inch.</p> <p>Items may include measurement tools such as: scales, rulers, yardsticks, tape measures, meter sticks, measuring cups, analog and digital clocks, thermometers, and their related units of measure. For a complete list of units for items involving measurement, see the Grade 5 FCAT 2.0 Mathematics Reference Sheet located in Appendix G.</p> <p>Items dealing with length should focus on precision, not on the tool used to measure length.</p> <p>Metric measures of mass may be to the nearest milligram.</p> <p>Linear metric measures may be to the nearest millimeter.</p> <p>Capacity metric measures may be to the nearest milliliter.</p> <p>Elapsed time may be to the nearest minute.</p>

<p>MA.5.G.5.4#:</p>	<p>Derive and apply formulas for areas of parallelograms, triangles, and trapezoids from the area of a rectangle.</p>	<p>Items assessing areas of trapezoids must use only isosceles trapezoids.</p> <p>Areas must include whole numbers with three or fewer significant digits and up to a maximum of five digits.</p>
<p>MA.5.S.7.1#:</p>	<p>Construct and analyze line graphs and double bar graphs.</p>	<p>Items may require students to predict if the line graph represents data that are increasing or decreasing. (Students at Grade 5 are NOT expected to use the word <i>trend</i>.)</p> <p>Analysis may include making and stating conclusions and predictions based on data, comparing data, determining appropriate scale increments dependent upon the range of the data, or identifying different parts of a graph.</p> <p>Items should not require students to determine the type of graph to use.</p> <p>Items should contain no more than 20 items of raw data that must be categorized or displayed.</p> <p>Students may be expected to perform addition, subtraction, multiplication, or division when identifying and/or analyzing graphs.</p>
<p>MA.5.S.7.2#:</p>	<p>Differentiate between continuous and discrete data, and determine ways to represent those using graphs and diagrams.</p>	<p>Items may include only the first quadrant in a graph.</p> <p>Items may include the terms <i>continuous</i> and <i>discrete</i>.</p> <p>Items may include frequency tables, single bar graphs, double bar graphs, pictographs, line plots, line graphs, and/or Venn diagrams.</p>