Grade 6 FCAT 2.0 Mathematics Achievement Level Descriptions

Florida Department of Education/Office of Assessment
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Grade 6 FCAT 2.0 Mathematics Reporting Category—Fractions, Ratios, Proportional Relationships, and Statistics	
Students performing at the mastery level of this reporting category will be able to multiply and divide fractions and decimals, and solve real-world problems involving percents, ratios, and rates. Students will also be able to analyze a data set and determine measures of central tendency and variability.	
Achievement Level	**Achievement Level Descriptions**
Level 5	<u>Students will consistently be able to</u> • determine the mean, median, mode, or range from a list, table, or graph; • analyze and determine which measures of central tendency or variability best describe the given data; • analyze which question can be answered from a given measure of central tendency; • determine a missing data point in a set given the mean, median, or mode; • recognize and construct a representation of the multiplication and division of fractions and decimals; • solve multiplication and division problems with decimals and fractions; • solve real-world, multiple-operation problems involving conversion between fractions, decimals, and percents; • convert, compare, and order fractions, mixed numbers, decimals, and percents; • estimate the results of computations with fractions, decimals, and/or percents; • judge the reasonableness of results of computations with fractions, decimals, and percents using different strategies; • translate and solve non-routine rate and ratio problems; and • compare rates and ratios to solve multi-step, real-world problems.

Level 4	<u>Students will usually be able to</u> • determine the mean, median, mode, or range from a list, table, or graph; • determine a missing data point in a set given the mean, median, or mode; • recognize a representation of the multiplication and division of fractions and decimals; • solve multiplication and division problems with decimals and fractions; • solve real-world, multi-step problems involving conversion between fractions, decimals, and percents; • convert, compare, and order fractions, decimals, and percents; • estimate the results of computations with fractions, decimals, and/or percents; • translate and solve multi-step rate and ratio problems; and • compare rates and ratios to solve one-step, real-world problems.
Level 3	<u>Students will generally be able to</u> • determine the mean, median, mode, or range from a list or table (for median, the data set must contain an odd number of data points); • recognize a representation of the multiplication of fractions or decimals or the division of decimals; • solve multiplication and division problems with fractions less than 1 and decimals; • solve real-world problems involving conversion between fractions, decimals, and percents; • convert, compare, and order fractions, decimals, and percents; • estimate the results of computations with decimals and/or percents; and • solve routine rate and ratio problems.

Level 2	<u>Students may be able to demonstrate limited ability to</u> • determine the median, mode, or range from a list or table (for median, the data set must contain an odd number of data points); • recognize a graphic representation of the multiplication of decimals or fractions; • solve multiplication and division problems with decimals; • convert between fractions, decimals, and percents; • compare and order fractions, decimals, and percents using numbers that can be easily converted; • estimate the results of computations with decimals; and • determine the unit rate.
Level 1	Performance at this level indicates an inadequate level of success with the challenging content of the *Next Generation Sunshine State Standards* for mathematics.

Grade 6 FCAT 2.0 Mathematics Reporting Category—Expressions and Equations	
Students performing at the mastery level of this reporting category will be able to write and evaluate expressions using mathematical properties. Students will also use algebraic notation to describe linear functions and simple relations and analyze and construct graphs and tables representing these relationships.	
Achievement Level	**Achievement Level Descriptions**
Level 5	Students will consistently be able to • translate and evaluate an expression; • translate a real-world situation to an equation or inequality; • solve and graph one- or two-step linear equations or inequalities; • identify commutative, associative, identity, inverse, and distributive properties; • use the commutative, associative, identity, inverse, or distributive property to show that two expressions are equivalent; • identify or construct a table that represents a two-step linear equation; • identify or construct a two-step linear equation from a table or graph; and • analyze a table or graph to identify or describe the rate of change.
Level 4	Students will usually be able to • translate and evaluate an expression; • translate a real-world situation to an equation or inequality; • solve and graph one- or two-step linear equations or inequalities; • identify commutative, associative, identity, inverse, and distributive properties; • use the commutative, associative, identity, inverse, or distributive property to show that two expressions are equivalent; • identify or construct a table that represents a two-step linear equation; • identify or construct a one-step linear equation from a table or graph; and • analyze a table or graph to identify or describe the rate of change.

Level 3	<u>Students will generally be able to</u> • translate and evaluate an expression where the coefficients and the value of the variables are whole numbers; • translate a real-world situation to an equation or inequality; • solve and/or graph one- and two-step linear equations or one-step inequalities; • identify commutative, associative, identity, inverse, and distributive properties; • use the commutative, associative, identity, or inverse property to show that two expressions are equivalent; • identify a table that represents a two-step linear equation with whole number coefficients; and • identify a one-step linear equation from a table.
Level 2	<u>Students may be able to demonstrate limited ability to</u> • evaluate an expression (excluding expressions using the distributive property) where the coefficients and the value of the variables are whole numbers; • translate a real-world situation to an equation; • solve one-step linear equations or inequalities; • identify commutative, associative, identity, inverse, and distributive properties; and • identify a table that represents a one-step linear equation with whole-number coefficients.
Level 1	Performance at this level indicates an inadequate level of success with the challenging content of the *Next Generation Sunshine State Standards* for mathematics.

Grade 6 FCAT 2.0 Mathematics Reporting Category—Geometry and Measurement	
Students performing at the mastery level of this reporting category will be able to analyze and solve problems involving the perimeter and area of two-dimensional composite figures and the volume of prisms.	
Achievement Level	**Achievement Level Descriptions**
Level 5	Students will consistently be able to • determine the diameter or radius given the circumference or area of a circle; • determine the area or circumference of a circle given a whole-number radius or diameter; • determine the perimeter or area of a composite shape comprised of polygons, semi-circles, and/or circles; • determine a missing dimension given the area of a two-dimensional figure or volume of a rectangular prism; and • determine the volume of a rectangular prism given whole-number dimensions.
Level 4	Students will usually be able to • determine the diameter or radius given the circumference of a circle; • determine the area or circumference of a circle given a whole-number radius or diameter; • determine the perimeter or area of a composite shape comprised of polygons, semi-circles, and/or circles; • determine a missing dimension given the area of a two-dimensional figure (rectangle, triangle, or square) or volume of a rectangular prism; and • determine the volume of a rectangular prism given whole-number dimensions.

Level 3	<u>Students will generally be able to</u> • determine the area or circumference of a circle given a whole-number radius or diameter; • determine the perimeter or area of a composite shape comprised of polygons given most of the whole-number dimensions; • determine a missing dimension given the area of a rectangle or volume of a rectangular prism having whole-number dimensions; and • determine the volume of a rectangular prism given whole-number dimensions.
Level 2	<u>Students may be able to demonstrate limited ability to</u> • determine the circumference of a circle given a whole-number radius; • determine the perimeter of a composite shape comprised of polygons given all of the whole-number dimensions; and • determine the area of a rectangle or volume of a rectangular prism given whole-number dimensions.
Level 1	Performance at this level indicates an inadequate level of success with the challenging content of the *Next Generation Sunshine State Standards* for mathematics.