

Achievement Level Descriptors Mathematics Grade 4

ALD	Standard	Level 2	Level 3	Level 4	Level 5
Policy		Students at this level demonstrate a below satisfactory level of success with the challenging content of the <i>Florida Standards</i> .	Students at this level demonstrate a satisfactory level of success with the challenging content of the <i>Florida Standards</i> .	Students at this level demonstrate an above satisfactory level of success with the challenging content of the <i>Florida Standards</i> .	Students at this level demonstrate mastery of the most challenging content of the <i>Florida Standards</i> .
		A student performing at Level 2	A student performing at Level 3	A student performing at Level 4	A student performing at Level 5
Operations and Algebraic Thinking					
Range	4.OA.1.1	[intentionally left blank]	recognizes that any two factors and their product can be read as a comparison; represents those comparisons as equations	creates a context for a multiplicative comparison problem given an equation	[intentionally left blank]
Range	4.OA.1.2	multiplies or divides to solve word problems involving multiplicative comparison (where the unknown is the product or quotient)	multiplies or divides to solve word problems involving multiplicative comparison (where the unknown is in a variety of positions)	creates and solves a multiplication equation with a symbol for the unknown number to represent a word problem involving multiplicative comparison	[intentionally left blank]
Range	4.OA.1.3	solves one-step word problems (which do not include remainders) using the four operations with simple context and scaffolding where the sum, difference, product, or quotient is always the unknown	solves two-step word problems (including interpreting remainders) using the four operations, where the unknown is in a variety of positions, and can be represented by a symbol/letter	solves three-step word problems using the four operations; recognizes the reasonableness of answers using mental computation and estimation strategies	solves multistep word problems with multiple possible solutions and determines which would be the most reasonable based upon given criteria
Range	4.OA.1a	determines whether an equation is true or false; identifies true and false equations that use comparative relational thinking	determines whether an equation is true or false, where addition or subtraction is used on both sides of the equal sign, and justifies by using comparative relational thinking	determines whether an equation is true or false, where multiplication or division is used on both sides of the equal sign, and justifies by using comparative relational thinking	determines whether an equation is true or false, where different operations are used on either side of the equal sign, and justifies by using comparative relational thinking

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Range	4.OA.1b	[intentionally left blank]	determines the unknown number in an equation relating four whole numbers, where addition or subtraction is used on both sides of the equal sign, and justifies using comparative relational thinking	determines the unknown number in an equation relating four whole numbers, where multiplication or division is used on both sides of the equal sign, and justifies using comparative relational thinking	determines the unknown number in an equation relating four whole numbers, where different operations are used on either side of the equal sign, and justifies using comparative relational thinking
Range	4.OA.2.4	finds factor pairs for numbers in the range of 1 to 100, and determines whether a whole number in the range of 1 to 100 is prime or composite, given visual representations	finds all factor pairs for whole numbers in the range of 1 to 100; recognizes that a whole number is a multiple of each of its factors; determines whether a whole number in the range of 1 to 100 is prime or composite	determines common factors and multiples of numbers in the range of 1 to 100	applies the concepts of both factors, multiples, and prime and composite numbers in problem-solving contexts
Range	4.OA.3.5	extends a number or shape pattern that follows a given one-step rule	generates a number or shape pattern that follows a given one-step rule	generates a number or shape pattern that follows a given two-step rule	identifies and/or explains apparent features that are not explicit in the rule from an observed pattern
Number and Operations in Base Ten					
Range	4.NBT.1.1	recognizes that a digit in one place represents 10 times as much as it represents in the place to its right (for numbers up to and including 10,000), with visual representations	recognizes that a digit in one place represents 10 times as much as it represents in the place to its right (for numbers up to and including 100,000)	recognizes that a digit in one place represents 10 times as much as it represents in the place to its right (for numbers up to and including 1,000,000)	[intentionally left blank]
Range	4.NBT.1.2	reads and writes multi-digit whole numbers to the thousands place	reads, writes, and compares whole numbers to the hundred-thousandths place, using base-ten numerals, number names, and expanded form	reads, writes, and compares multi-digit whole numbers to the millions place using base-ten numerals, number names, and expanded form	writes and compares whole numbers in expanded form in multiple formats

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Range	4.NBT.1.3	uses place value understanding to round multi-digit whole numbers to any place within 1,000	uses place value understanding to round multi-digit whole numbers to any place within 1,000,000	uses place value understanding to round whole numbers up to any place where the digit to the left is also affected (e.g., round 199 to the nearest ten)	determines a number that falls between two numbers of different place values
Range	4.NBT.2.4	adds and subtracts two multi-digit whole numbers using the standard algorithm (not including subtraction across zeros)	fluently adds up to three and subtracts two multi-digit whole numbers using the standard algorithm	determines the missing digit(s) within the addend in an addition or subtraction problem	analyzes and describes an error in a strategy and shows the correct solution
Range	4.NBT.2.5	multiplies a whole number (of up to three digits) by a single-digit whole number, including the use of strategies based on place value and visual models	multiplies a whole number up to four digits by a single-digit whole number and two two-digit whole numbers, using strategies based on place value; illustrates and explains calculations by using equations, rectangular arrays, and/or area models	determines the equation that represents a base-ten model; makes connections between different multiplication strategies	analyzes and describes an error in a strategy and shows the correct solution
Range	4.NBT.2.6	divides a whole number (of up to three digits) by a single-digit whole number, using strategies based on place value	divides a whole number up to four digits by a single-digit whole number (including remainders), using strategies based on place value, properties of operations, and/or the relationship between multiplication and division; illustrates and explains calculations by using equations, rectangular arrays, and/or area models	determines the equation that represents a base-ten model; makes connections between different division strategies	analyzes and describes an error in a strategy and shows the correct solution

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Number and Operations—Fractions					
Range	4.NF.1.1	uses visual fraction models to recognize equivalent fractions by partitioning unit fraction pieces into smaller equal pieces	uses visual fraction models to generate and explain equivalent fractions by partitioning unit fraction pieces into smaller pieces (and understands that this is the same); generates and explains why fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$, and multiplies by 1 represented as a fraction	uses a variety of strategies to generate and justify why fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$	[intentionally left blank]
Range	4.NF.1.2	uses visual fraction model to compare two fractions with different numerators and different denominators (2, 3, 4, 6, and 8), using $<$, $>$, and $=$, with the understanding that the fractions must refer to the same whole	compares two fractions with different numerators and different denominators, using visual fraction models and $<$, $>$, and $=$	compares two fractions with different numerators and different denominators, using $<$, $>$, and $=$; justifies answers	[intentionally left blank]
Range	4.NF.2.3	adds and subtracts fractions with like denominators by joining and separating parts referring to the same whole; decomposes a fraction into a sum of fractions with the same denominator in more than one way and records and represents the decomposition using an equation	adds and subtracts fractions and/or mixed numbers with like denominators, in mathematical and real-world context, by replacing each mixed number with an equivalent fraction, without regrouping, and by using the properties of operations and the relationship between addition and subtraction; decomposes a mixed number into a sum of fractions with the same denominator in more than one way and records and justifies the decomposition	adds and subtracts mixed numbers with like denominators, in mathematical and real-world context, by replacing each mixed number with an equivalent fraction, with regrouping, and by using the properties of operations and the relationship between addition and subtraction	solves multistep word problems involving addition and subtraction of fractions and/or mixed numbers

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Range	4.NF.2.4	understands a fraction a/b as a multiple of $1/b$ including the use of visual fraction models or repeated addition	understands and solves one-step mathematical and real-world problems involving a fraction a/b as a multiple of $1/b$, and uses this understanding to multiply a fraction by a whole number, using visual fraction model	understands and solves word problems by recognizing that fraction a/b is a multiple of $1/b$, and uses that construct to multiply a fraction by a whole number (in general, $n \times a/b$ is $(n \times a)/b$)	solves multistep word problems
Range	4.NF.3.5	expresses a fraction with denominator 10 as an equivalent fraction with denominator 100 by using a model	adds two fractions with respective denominators 10 and 100 by first finding equivalent fractions with like denominators	solves missing addend problems with respective denominators 10 and 100 by first finding equivalent fractions with like denominators	[intentionally left blank]
Range	4.NF.3.6	writes decimal notation for fractions with a denominator of 10, and vice versa, with visual models	writes decimal notation for fractions with denominators of 10 or 100, and vice versa, including locating on a number line	writes decimal notation for fractions greater than 1 with denominators of 10 or 100, and vice versa, including locating on a number line	[intentionally left blank]
Range	4.NF.3.7	compares two decimals with the same number of places (tenths or hundredths) using visual models; recognizes that the decimals must refer to the same whole	compares two decimals to the hundredths (using $<$, $>$, and $=$) by reasoning about their size and justifies using models	determines a decimal that is between two given decimals	[intentionally left blank]
Measurement and Data, Geometry					
Range	4.MD.1.1	knows relative size of measurement units, within one system of units	expresses measurements in a larger unit in terms of a smaller unit, within a single system, records that data in a two-column table	expresses measurements in a larger unit in terms of a variety of smaller units, within a single system	given a context, determines the appropriate unit needed and expresses the measurement to the level of accuracy needed

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Range	4.MD.1.2	uses the four operations to solve word problems (involving distance, intervals of time, and money) with context, including problems involving whole numbers	uses the four operations to solve word problems (involving distance, intervals of time, and money) including problems involving simple fractions or decimals; represents measurement quantities using linear models	uses the four operations to solve word problems including problems involving simple fractions or decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit	uses the four operations to solve multistep word problems, including problems involving fractions or decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit
Range	4.MD.1.3	applies the area and perimeter formulas when given all side measurements	applies the area and perimeter formulas for rectangles in real-world and mathematical problems	applies the area and perimeter formulas for rectangles in real-world and mathematical problems, including those where the area/perimeter and one factor (length or width) are known	applies the area and perimeter formulas for rectilinear shapes in real-world and mathematical problems; finds missing dimensions of rectangles when provided adequate perimeter and/or area information of the rectangle; discovers methods of maximizing area using a given perimeter, and vice versa
Range	4.MD.2.4	makes a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$)	uses addition and subtraction of fractions to solve problems by using information from a line plot	uses addition and subtraction of fractions to solve two-step problems by using information from a line plot	uses addition and subtraction of fractions to solve multistep problems by using information from a line plot; draws conclusions
Range	4.MD.3.5 4.MD.3.6	recognizes angles as geometric shapes; recognizes angle measures with reference to a circle	measures angles using a protractor up to 180 degrees; sketches angles of specified measure	measures and identifies angles between 180 and 360 degrees	[intentionally left blank]
Range	4.MD.3.7	recognizes that angle measure is additive; solves addition real-world and mathematical problems to find unknown angles on a diagram with no more than two angles, within a 90-degree angle	solves addition and subtraction real-world and mathematical problems to find unknown angles on a diagram with no more than two angles, within a 180-degree angle	finds unknown angles on a diagram with more than two angles and between 180 and 360 degrees total	given angle parameters, decomposes into multiple angles and gives the measure of each angle in relationship to the whole

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Range	4.G.1.1	identifies points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines	draws points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines; identifies these in two-dimensional figures	draws a figure based on multiple attributes	[intentionally left blank]
Range	4.G.1.2	identifies two-dimensional figures	classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size; identifies right triangles	constructs two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size	analyzes and justifies how groups of two-dimensional figures are sorted based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size
Range	4.G.1.3	recognizes a line of symmetry in a two-dimensional figure	identifies line-symmetric figures and draws lines of symmetry for two-dimensional figures	identifies figures with more than one line of symmetry	constructs a figure with a specified number of lines of symmetry