



Morgan County Schools
Fifth Grade Math Pacing Guide
Check List
2020-2021

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5th Grade Pacing Guide
2020-2021

Date	First Nine Weeks
	Number and Operations in Base Ten
	3. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left (whole numbers)
	3.a Explain patterns in the number of zeros of the product when multiplying by powers of 10, using whole-number exponents to denote powers of 10.(whole numbers)
	4: Read, write, and compare decimals to thousandths
	4a: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form .
	4b: Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
	5: Use place value understanding to round decimals to any place.
	8a.&b: Add, subtract,..... to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method, and explain the reasoning. Solve problems with real world context with decimals to the hundredths.
	Operations and Algebraic Thinking
	1: Write, explain, and evaluate simple numerical expressions involving the four operations to solve up to two-step problems. Include expressions involving parentheses, brackets, or braces, using commutative, associative, and distributive properties.
	Measurement and Data
	17: Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multistep, real-world problems.
	18: Identify volume as an attribute of solid figures, and measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised (non- standard) units.
	18a: A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.
	19: Relate volume to the operations of multiplication and addition, and solve real-world and mathematical problems involving volume. (whole numbers)
	19a: Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication
	19b: Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.
	19c: Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.

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Date	Second Nine Weeks
	Operations and Algebraic Thinking
	1: Write, explain, and evaluate simple numerical expressions involving the four operations to solve up to two-step problems. Include expressions involving parentheses, brackets, or braces, using commutative, associative, and distributive properties. (decimals)
	2: Generate two numerical patterns using two given rules and complete an input/output table for the data.
	2.a. Use data from an input/output table to identify apparent relationships between corresponding terms.
	2.b. Form ordered pairs from values in an input/output table.
	2.c. Graph ordered pairs from an input/output table on a coordinate plane.
	Number and Operations in Base Ten
	3: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. (Whole numbers and decimals)
	3a & b: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10. (Whole numbers and decimals)
	6: Fluently multiply multi-digit whole numbers using the standard algorithm.
	7: Use strategies based on place value, properties of operations, and/or the relationship between multiplication and division to find whole-number quotients and remainders with up to four digit dividends and two-digit divisors. Illustrate and explain the calculator by using equation, rectangular arrays, and /or area models.
	8:multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method, and explain the reasoning used. (Multiply and divide decimals)
	Geometry
	20: Graph points in the first quadrant of the coordinate plane, and interpret coordinate values of points to represent real-world and mathematical problems.
	21: Classify triangles according to side length (isosceles equilateral, scalene) and angle measure (acute, obtuse, right, equiangular)
	22: Classify two-dimensional figures in a hierarchy based on properties
	23: Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

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Date	Third Nine Weeks
	Number and Operations in Base Ten
	7: Use strategies based on place value, properties of operations, and/or the relationship between multiplication and division to find whole-number quotients and remainders with up to four digit dividends and two-digit divisors. Illustrate and explain the calculator by using equation, rectangular arrays, and /or area models.
	Measurement and Data
	16: Make a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots.
	Number and Operations - Fractions
	9: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally, and assess the reasonableness of answers.
	10: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.
	11a: Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
	11b: Use visual fraction models, drawings, or equations to represent work problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.
	12: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
	12a: Use a visual fraction model to show $(a/b) \times q$ and create a story context for this equation to interpret the product as a parts of a partition of q into b equal parts.
	12b: Use a visual fraction model to show $(a/b) \times (c/d)$ and create a story content for the equation to interpret the product.
	12.c: Multiply fractions side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
	12d: Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
	13: Interpret multiplication as scaling (resizing), by:
	13a: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
	13b&c: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case), explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number, and relating the principle of fraction equivalence to the effect of multiplying by 1
	15: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
	15a: Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions and illustrate using visual fraction models, drawing, and equations to represent the problem.
	15b: Create a story context for a unit fraction divided by a whole number, and use a visual fraction model to show the quotient.
	15c: Create a story content for a whole number divided by a unit fraction, and use a visual fraction to show the quotient

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	Algebraic Thinking
	1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. (Whole numbers, decimals, and fractions)
	Number and Operations – Fractions
	10: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally, and assess the reasonableness of answers.
	14: Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
	15: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
	15a: Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions and illustrate using visual fraction models, drawing, and equations to represent the problem.
	15b: Create a story context for a unit fraction divided by a whole number, and use a visual fraction model to show the quotient.
	15c: Create a story content for a whole number divided by a unit fraction, and use a visual fraction to show the quotient
	Measurement and Data
	16a: Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.
	19: Relate volume to the operations of multiplication and addition, and solve real-world and mathematical problems involving volume.
	19a: Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication
	19b: Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.
	19c: Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems