



K-5 ARKANSAS
MATH
STANDARDS PROGRESSION



DIVISION OF ELEMENTARY
& SECONDARY EDUCATION

HOW TO READ THE PROGRESSION

The K–5 Arkansas Math Standards progression is designed to help teachers understand how mathematical concepts build across grade levels. It should be read from left to right, showing how a concept develops over time. The progression uses a color-coded system to visually represent grade-level emphasis. It’s important to note that this progression is not a required teaching sequence; teachers should rely on their high-

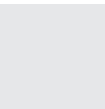
quality instructional materials (HQIM) to guide how and when to teach each standard. The purpose of the progression is to build awareness of how concepts evolve and where mastery is expected, supporting coherent instruction across grade levels. **Bolded standards indicate fluency expectations — computing efficiently, flexibly, and accurately. For support, see the Fluency Support Document on the DESE webpage.**



COLOR CODE SYSTEM

K **1** **2** For grades K–2, green is used starting with light green to indicate early exposure and deepening to dark green as the concept changes grades.

3 **4** **5** For grades 3–5, blue is used in the same way, with light blue showing grade band change and dark blue as the concept changes grades.

 A gray box signals the end of the learning for that particular concept, meaning no further development is expected in K–5 grade band.

NUMBER & PLACE VALUE FOUNDATIONS								
Number Sense & Counting	K.NPV.4 Identify quickly a number of items in a set from 0 to 10 without counting.	K.NPV.1 Count to 100 by ones and tens; count forward by ones from any given number up to 100. Focus: Rote Counting	K.NPV.7 Use matching and counting strategies to compare the number of objects in one group to the number of objects in another group (0 to 10) using the terms greater than, less than, or equal.	K.NPV.2 Count a set of objects up to 20 using one-to-one correspondence, demonstrating that the last number stated indicates the number of objects in the set regardless of the arrangement.	K.NPV.3 Identify the position of objects in a set using ordinal numbers (first, second, third, etc.).	1.NPV.1 Count forward and back within 120 by ones and tens from any given whole number.	2.NPV.1 Count within 1,000 forwards and backwards by ones, tens, and hundreds from any given number.	
Numerical Recognition	K.NPV.5 Read, write, and represent whole numbers from 0 to 20.	1.NPV.4 Read, write, and represent whole numbers up to 120, using concrete models or drawings, word form, base ten numerals, and expanded form.	1.NPV.5 Use concrete models or drawings to subtract multiples of 10 from multiples of 10 (within the range of 10–90), relate the strategy to a written expression or equation, and explain the reasoning used to solve.	2.NPV.3 Read, write, and represent whole numbers up to 1,000 using concrete models or drawings, number names, and a variety of expanded forms.	3.NPV.3 Read and write whole numbers up to 10,000, using base ten numerals, word form, and a variety of expanded forms.	4.NPV.2 Read and write whole numbers up to 1,000,000 using base ten numerals, word form, and a variety of expanded forms.	5.NPV.3 Read and write decimals to thousandths, using base-ten numerals, word form, and a variety of expanded forms.	
Place Value (Base 10) <i>Foundational Standards for Operations</i>	K.NPV.6 Show equivalent forms of whole numbers up to 20 as groups of tens and ones, using manipulatives and drawings.	1.NPV.3 Explain the place value of ones and tens in two-digit numbers, using concrete models, diagrams, numbers, or words.	1.NPV.6 Use mental strategies to find 10 more or 10 less than a given two-digit number.	2.NPV.2 Identify the value of hundreds, tens, and ones place in a three-digit number.	2.NPV.4 Mentally add 10 or 100 to a given number in the range of 100–900 and mentally subtract 10 or 100 from a given number in the range of 100–900.	3.NPV.2 Identify the value of thousands, hundreds, tens, and ones place in a four-digit number.	3.CAR.4 Use strategies to multiply one-digit numbers by multiples of 10 ranging from 10–90; strategies are based on place value and properties of operations.	4.NPV.1 Recognize that a digit in a given place represents ten times what it represents in the place to its right.
Whole Number Comparison	K.NPV.8 Compare two whole numbers, using the terms greater than, less than, or equal.	1.NPV.7 Compare two two-digit numbers using symbols (<, =, >) based on the value of tens and ones in the given numbers.	2.NPV.5 Compare two three-digit numbers using symbols (<, =, >) based on the value of hundreds, tens, and ones in the given numbers.	3.NPV.4 Compare two four-digit numbers using symbols (<, =, >) based on the value of thousands, hundreds, tens, and ones in the given numbers.	4.NPV.4 Compare two five-digit whole numbers and six-digit whole numbers, using symbols (<, =, >) to record the results of comparisons.			
Decimal Foundation	4.NPV.10 Apply decimal notation for fractions with denominators 10 or 100.	4.NPV.6 Compare two decimals to the hundredths place, using symbols (<, =, >) to record the results of comparisons.	5.NPV.1 Recognize that, in a multi-digit number, a digit in a given 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.	5.NPV.5 Compare two decimals to thousandths based on the value of the digits in each place, using symbols (<, =, >) to record the results of comparisons.	5.NPV.2 Explain patterns in the number of zeros and/or the decimal point when multiplying or dividing a number by a power of 10, using whole-number exponents to denote powers of 10.	5.CAR.3 Add and subtract decimals to the hundredths using concrete models or drawings and strategies based on place value, properties of operations, or the relationship between addition and subtraction.	5.CAR.4 Multiply and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, or the relationship between multiplication and division.	
Rounding	3.NPV.1 Round four-digit whole numbers to the nearest 10 or 100, using place value understanding.	4.NPV.3 Use place value understanding to round five-digit and six-digit whole numbers to any place.	5.NPV.4 Apply place value understanding to round decimals to any place up to the thousandths.					
Fraction Comparison	3.NPV.5 Compare two fractions with the same numerator or denominator by reasoning about their size based on the same whole; use symbols (<, =, >) and justify the conclusion using visual fraction models, concrete objects, or words.	4.NPV.5 Compare two fractions with different numerators and different denominators using symbols (<, =, >) to record the results of comparisons.						

ADDITION & SUBTRACTION FOUNDATIONS & OPERATIONS								
Basic Facts Fluency Whole Numbers 1-10	K.CAR.1 Use objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations to represent addition and subtraction from 0 to 10.	K.CAR.2 Use objects or drawings to decompose numbers less than or equal to 10 into pairs in more than one way, recording each decomposition.	K.CAR.3 Use a drawing or equation to find the number that makes 10 when added to a given number.	K.CAR.4 Use manipulatives and various strategies to fluently add and subtract within 10.	1.CAR.1 Add and subtract fluently within 10 with mastery by the end of first grade.			
Computational Fluency Whole Numbers 1-20	1.CAR.3 Apply properties of operations to add and subtract within 20.	1.CAR.2 Use computational fluency to add and subtract within 20 using manipulatives and/or a variety of strategies.	2.CAR.1 Use mental strategies to fluently add and subtract within 20 with mastery by the end of second grade.					
Computational Fluency Whole Numbers 1-1,000,000	1.CAR.4 Use concrete models or drawings to add within 100, including a two-digit number and a one-digit number as well as a two-digit number and a multiple of ten; relate strategy used to a written expression or equation and explain reasoning.	2.CAR.4 Use a number line to solve addition and subtraction problems within 100.	2.CAR.2 Use computational fluency to add and subtract within 100 using strategies based on place value, properties of operations, or the relationship between addition and subtraction.	2.CAR.3 Add up to four two-digit numbers with sums not exceeding 100 using strategies based on place value and properties of operations.	2.CAR.6 Use concrete models, drawings, or equations to solve addition and subtraction problems within 1000.	3.CAR.1 Use computational fluency to add and subtract three-digit whole numbers, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	4.CAR.2 Use computational fluency to add and subtract whole numbers up to 1,000,000 by using strategies and algorithms, including the standard algorithm, with mastery by the end of fourth grade.	
Unknown Whole Numbers and Addition/ Subtraction	1.CAR.5 Demonstrate the relationship between addition and subtraction by solving problems, using an inverse operation.	1.CAR.8 Apply understanding of the equal sign to determine if equations involving addition and subtraction are true or false.	1.CAR.9 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	2.CAR.8 Determine whether a group of objects up to 20 has an odd or even number of members; write an equation to express an even number as a sum of two equal addends.				
Application of Operations <i>Incorporate throughout the concept</i>	K.CAR.5: Solve real-world problems involving addition and subtraction within 10, using objects, drawings, or equations to represent the problem.	1.CAR.6 Solve real-world problems involving addition and subtraction within 20.	1.CAR.7 Solve real-world problems involving addition of three whole numbers whose sum is less than or equal to 20.	2.CAR.7 Solve one and two-step real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing unknowns in all positions.				

MULTIPLICATION & DIVISION FOUNDATIONS & OPERATIONS						
Basic Fact Fluency: Whole Numbers	1.NPV.2 Skip count forward by multiples of fives within 120.	2.CAR.5 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	3.CAR.2 Use basic fact fluency to multiply and divide whole numbers with mastery by the end of third grade.	4.CAR.1 Find the factor pairs for a given number in the range of 1-100, identifying whether a number is prime or composite; determine whether a given whole number in the range of 1-100 is a multiple of a given one-digit number.		
	4.CAR.3 Use strategies based on place value and the properties of operations to multiply four-digit by one-digit whole numbers and two two-digit whole numbers.	4.CAR.4 Use strategies based on place value, the properties of operations, and the relationship between multiplication and division to divide whole numbers with four-digits by one-digit divisors; quotients should be with and without whole number remainders.	5.CAR.1 Use computational fluency to multiply multi-digit whole numbers by using strategies and algorithms, including the standard algorithm, with mastery by the end of fifth grade.	5.CAR.2 Calculate whole number quotients of whole numbers with up to four-digit dividends and two-digit divisors using strategies based on place value, properties of operations, divisibility rules, and the relationship between multiplication and division (long-division). Note: Fluency with multi-digit division is expected in 6th grade.		
Application of Operations <i>Incorporate throughout the concept</i>	3.CAR.3 Apply properties of operations as strategies to multiply and divide.	3.CAR.6 Solve real-world problems using multiplication and division within 100 involving equal groups, arrays, partitive and measurement division.	3.CAR.7 Solve two-step real-world situations using addition, subtraction, multiplication, and division, representing these problems using equations with a symbol standing for an unknown quantity.	4.CAR.7 Solve real-world problems involving multiplicative comparison, using drawings and/or equations with a symbol for the unknown number, and distinguish between multiplicative comparison and additive comparison.	4.CAR.8 Solve multi-step, real-world problems posed with whole numbers and having whole-number answers, using addition, subtraction, multiplication, and division; include problems in which remainders must be interpreted and represent these problems using equations with symbols standing for the unknown quantity.	
Algebraic Concept: Patterns	3.CAR.5 Identify arithmetic patterns including, but not limited to, patterns in an addition or multiplication table, explaining use of properties of operations appropriate to the pattern.	4.CAR.11 Generate a number or shape pattern that follows a given rule, identifying apparent features of the pattern that are not explicit in the rule itself.	5.CAR.14 Generate two numerical patterns given two rules, identifying the relationship between the corresponding terms by graphing the terms in the first quadrant of the coordinate grid.			
Algebraic Concept: Numerical Expressions	3.CAR.8 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	3.CAR.9 Understand division as an unknown-factor problem.	5.CAR.12 Evaluate numerical expressions with parentheses or brackets and exponents with the base of ten, using the Order of Operations.	5.CAR.13 Write simple expressions that record calculations with numbers, interpreting numerical expressions without evaluating them.		

FRACTION FOUNDATIONS & OPERATIONS								
Fraction Foundations	1.NPV.8 Partition circles and rectangles into two and four equal shares, describing the shares using the words halves, fourths, and quarters; understand that decomposing into more equal pieces creates smaller pieces.	2.NPV.6 Partition circles and rectangles into two, three, or four equal shares, describing the shares using the words halves, thirds, and fourths (or quarters).	2.NPV.7 Recognize that equal shares of identical wholes need not have the same shape.	3.NPV.6 Identify fractions as parts of a whole and parts of a collection or set.	3.NPV.7 Partition squares, regular hexagons, and equilateral triangles into parts with equal shares, explaining the shares of each part as a unit fraction of the whole.	3.NPV.8 Identify and represent a unit fraction as a number on the number line. 3.NPV.9 Identify and represent a non-unit fraction as a number on the number line, including fractions greater than one.	3.NPV.11 Use number lines and visual models to recognize and generate equivalent fractions, explaining how they are equivalent in real-world and mathematical situations.	4.NPV.8 Explain why a fraction a/b is equivalent to a fraction $(n \cdot a)/(n \cdot b)$, using visual fraction models, generating equivalent fractions using the principle $a/b = (n \cdot a)/(n \cdot b)$.
Addition and Subtraction Fractions	3.NPV.10 Decompose and compose a non-unit fraction a/b as the quantity formed by the sum of unit fractions.	4.NPV.7 Decompose fractions, including fractions greater than one and mixed numbers, into unit fractions, using concrete models, drawings, and/or the number line.	4.NPV.9 Add two fractions with denominators of 10 and 100 by expressing the denominator of 10 as an equivalent fraction with a denominator of 100.	4.CAR.5 Add and subtract fractions, including mixed numbers, with like denominators, using visual fraction models and equations.	5.CAR.5 Add and subtract fractions with like and unlike denominators by using equivalent fractions $\{a/b = (n \cdot a)/(n \cdot b)\}$ to create common denominators; include real-world problems.			
Multiplication & Division of Fractions	4.CAR.6 Multiply a fraction by a whole number using visual fraction models and equations.	4.CAR.10 Solve real-world problems involving the multiplication of a fraction by a whole number using visual fraction models or equations.	5.NPV.6 Use visual models to explain the product of multiplying a whole number by a fraction greater than and less than one.	5.CAR.7 Use visual models and equations to multiply whole numbers by fractions and fractions by fractions, including mixed numbers and fractions greater than one.	5.CAR.6 Interpret and solve fractions as division problems, $(a/b = a \div b)$, where a and b are natural numbers.	5.CAR.8 Apply previous understanding of division to divide unit fractions by whole numbers and whole numbers by unit fractions.		
Application of Operations <i>Incorporate throughout the concept</i>	4.CAR.9 Solve real-world problems involving the addition and subtraction of fractions; include mixed numbers with like denominators, using visual fraction models or equations.	5.CAR.9 Solve and create real-world problems involving multiplication of fractions and mixed numbers.	5.CAR.10 Solve real-world problems involving the division of natural numbers leading to answers in the form of fractions or mixed numbers using visual models and equations.	5.CAR.11 Solve real-world problems involving the division of unit fractions by whole numbers and whole numbers by unit fractions, using visual fraction models and equations.				

GEOMETRY

Shape Attributes	K.GM.1 Describe the positions of objects and geometric shapes in the environment.	K.GM.2 Name shapes correctly regardless of their orientation or overall size.	K.GM.3 Identify two-dimensional attributes of three-dimensional objects.	K.GM.4 Analyze and sort a variety of two and three-dimensional shapes using informal language to describe their similarities, differences, and other attributes.	2.GM.2 Identify and describe three-dimensional shapes based on the shape, number of faces, number of edges, and number of vertices.	3.GM.1 Understand that quadrilaterals in different categories may share attributes; those attributes (e.g., four equivalent sides) can define a larger category (e.g., quadrilaterals) or subcategory (e.g., rhombus and square).	4.GM.5 Classify two-dimensional figures based on the presence or absence of parallel lines, perpendicular lines, or angles of a specified size, involving quadrilaterals and triangles.	5.GM.1 Classify two-dimensional figures in a hierarchy based on properties with the focus on quadrilaterals and triangles when teaching hierarchies.
Shape Composition	K.GM.5 Compose and draw shapes found in the world using objects (e.g., straws, toothpicks, clay balls).	1.GM.1 Understand the difference between defining attributes (e.g., triangles are closed and three-sided shapes) and non-defining attributes (e.g., color, orientation, overall size), using that understanding to build and draw shapes that exhibit defining attributes.	1.GM.2 Create a composite shape using two-dimensional or three-dimensional shapes.	2.GM.1 Identify, describe, and draw two-dimensional shapes.	3.GM.3 Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, identifying and/or drawing examples of quadrilaterals that do not belong to any of these subcategories.			
Lines and Angles	3.GM.2 Identify perpendicular and parallel lines, as well as right angles in two-dimensional shapes and real-world surroundings or objects.	4.GM.4 Identify and draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines, identifying these in quadrilaterals and triangles.	4.GM.1 Identify angles as geometric shapes that are formed where two rays share a common endpoint, understanding that angles are measured with reference to a circle so that an angle that turns through a 1/360 of a circle is called a “one-degree angle” and an angle that turns through n one-degree is said to have an angle measure of n degree.	4.GM.2 Measure angles in whole-number degrees, using a protractor, drawing angles of specified measure.	4.GM.3 Solve real-world problems finding the unknown angle measures, using addition and subtraction when an angle is decomposed into non-overlapping parts.	4.GM.6 Identify and/or draw lines of symmetry for a two-dimensional figure.		
Coordinate Plane	5.GM.7 Graph points with whole number coordinates on a coordinate plane in the first quadrant, explaining how the coordinates relate to the horizontal and vertical axes to describe the location of points in the plane.	5.GM.8 Represent real-world and mathematical problems by graphing points in the first quadrant on a coordinate plane, interpreting the coordinate values of points in the context of the situation.						

MEASUREMENT

Measurement Concept	K.GM.6 Make direct comparisons of the length, capacity, weight, and temperature of objects, recognizing which object is shorter/longer, lighter/heavier, warmer/cooler, or holds more.	1.GM.4 Order three objects by their length, indirectly comparing the lengths of two objects by using a third object.	1.GM.3 Express the length of an object as a whole number of units by laying multiple copies of a shorter object end-to-end, understanding that the length of one object is equal to the number of same-size units that span the object with no gaps or overlaps.	2.GM.3 Select appropriate measurement tools to estimate and measure the length of an object to the nearest whole inch or whole centimeter.	2.GM.5 Measure to determine how much longer or shorter one object is than another, expressing the length difference in terms of a standard length whole unit.	2.GM.4 Demonstrate how the length of an object does not change, regardless of the units used to measure it, by measuring the length of an object twice; use two different length units, describing how the two measurements relate to the size of the chosen unit.	2.GM.6 Solve real-world problems involving lengths of the same units, using addition and subtraction within 100.	3.GM.4 Measure lengths of objects to the nearest half and quarter inch, using a ruler.
Perimeter and Area	2.GM.7 Solve real-world and mathematical problems to find the perimeter of polygons.	2.GM.8 Partition a rectangle into rows and columns of same-size squares, counting the total number of squares to find the area.	3.GM.5 Describe area as the number of unit squares that cover a plane figure without gaps and overlaps.	3.GM.6 Find the area of a rectangle with whole number side lengths by modeling with unit squares and multiplying the side lengths to show the results are the same.	3.GM.7 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems.	4.GM.7 Apply the area and perimeter formulas for rectangles and figures composed of two or more rectangles in real-world situations.	5.GM.2 Find the area of a rectangle with fractional and/or mixed number side lengths by using models and multiplying the fractional side lengths.	
Volume	5.GM.3 Measure volumes by counting unit cubes using cubic cm, cubic in, cubic ft, and improvised units.	5.GM.4 Solve real-world and mathematical problems involving the volume of rectangular prisms with whole number side lengths by applying the formulas ($V = l \times w \times h$ or $V = B \times h$) and the properties of operations.	5.GM.5 Solve real-world problems by calculating volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts.					
Measure and Conversions	3.GM.8 Measure and estimate liquid volumes and masses of objects using standard units.	3.GM.9 Solve one-step real-world problems involving the liquid volumes and masses of objects in the same units, using all four operations.	4.GM.11 Solve real-world problems involving distances, liquid volume, and masses of objects, including problems that require expressing measurements given in a larger unit in terms of a smaller unit.	4.GM.8 Convert measurements of length, weight/mass, and liquid volume within the same system of measurement, metric and customary, expressing measurements from a larger unit in terms of a smaller unit.	5.GM.6 Convert among different-sized standard measurement units within the same system, including both metric and customary, and solve multi-step, real-world problems using conversions.			
Time	K.GM.7 Understand concepts of time, recognizing that clocks and calendars are tools that measure time (Include morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year).	1.GM.5 Tell and write time to the nearest hour and half hour using analog clocks; understand how to read hours and minutes using digital clocks.	2.GM.10 Describe relationships of time (Include seconds in a minute, minutes in an hour, hours in a day, days in a week, and days, weeks and months in a year).	2.GM.9 Using an analog clock, tell and write time to the nearest five minutes using colon notation and indicate a.m. or p.m.	2.GM.11 Solve real-world problems involving the addition and subtraction of time intervals in half hours or hours.	3.GM.10 Tell and write time to the nearest minute, using analog clocks.	3.GM.11 Solve word problems involving addition and subtraction of time intervals in minutes.	4.GM.9 Solve real-world problems involving time intervals that may cross the hour.
Money	K.GM.8 Identify pennies and dimes by name and value.	1.GM.6 Identify coins by name and value, including penny, nickel, dime, and quarter.	1.GM.7 Count collections of like coins including pennies, nickels, and dimes to determine their total value up to 100 cents.	2.GM.12 Count collections of mixed coins and solve real-world problems involving quarters, dimes, nickels, and pennies within 99 cents and whole dollar amounts.	4.GM.10 Solve real-world problems involving addition and subtraction of money, including the ability to make change.			

DATA ANALYSIS

Organize Data	K.DA.1 Collect, sort, and organize data into two or three categories, using real-object graphs and picture graphs.	1.DA.1 Organize, represent, and interpret data with up to three categories (e.g., tally tables, picture graphs, bar graphs).	2.DA.1 Use bar graphs, picture graphs, and line plots to organize and represent data, interpreting data with up to four categories.	3.DA.1 Represent a data set with multiple categories, using a scaled picture graph, scaled bar graph, and a line plot.	4.DA.1 Collect and interpret data from observations, surveys, and experiments; represent data using frequency tables and scaled bar graphs.	5.DA.1 Collect and interpret data from observations, surveys, and experiments; represent data using frequency tables, scaled bar graphs, and scaled line graphs.	
Analyze Data	1.DA.2 Ask and answer questions about the total number represented such as how many in each category and how many more or less in one category compared to another.	2.DA.2 Ask and answer simple put together, take apart, and compare problems, using information presented in the bar graphs, picture graphs, and line plots.	3.DA.2 Solve one and two-step problems, using categorical data represented with a scaled picture graph, scaled bar graph, and a line plot.	4.DA.2 Use a line plot to display a data set of measurements in fractions of a unit, solving problems involving addition and subtraction of fractions with like denominators using data presented in line plots.	5.DA.2 Use a line plot to display a data set of measurements in fractions of a unit solving problems involving all four operations with fractions (excluding division of a fraction by fraction) using data presented in line plots.		



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