

Grade 1 – Arkansas Mathematics Standards

Operations and Algebraic Thinking	Represent and solve problems involving addition and subtraction
AR.Math.Content.1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using objects, drawings, and <i>equations</i> with a symbol for the unknown number to represent the problem)
AR.Math.Content.1.OA.A.2	Solve word problems that call for addition of three <i>whole numbers</i> whose <i>sum</i> is less than or equal to 20 (e.g., by using objects, drawings, and <i>equations</i> with a symbol for the unknown number to represent the problem)

Operations and Algebraic Thinking	Understand and apply properties of operations and the relationship between addition and subtraction
AR.Math.Content.1.OA.B.3	<p>Apply properties of operations as strategies to add and subtract</p> <p>For example: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (<i>commutative property of addition</i>). To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (<i>associative property of addition</i>).</p> <p>Note: Students need not use formal terms for these properties.</p>
AR.Math.Content.1.OA.B.4	<p>Understand subtraction as an unknown-addend problem</p> <p>For example: Subtract $10 - 8$ by finding the number that makes 10 when added to 8.</p>

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Operations and Algebraic Thinking	Add and subtract within 20
AR.Math.Content.1.OA.C.5	Relate counting to addition and subtraction (e.g., by <i>counting on</i> 2 to add 2)
AR.Math.Content.1.OA.C.6	<p>Add and subtract within 20, demonstrating <i>computational fluency</i> for addition and subtraction within 10</p> <p>Use strategies such as:</p> <ul style="list-style-type: none"> • <i>Counting on</i> • Making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$) • Decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$) • Using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$) • Creating equivalent but easier or known <i>sums</i> (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) <p>Note: <i>Computational fluency</i> is demonstrating the method of student choice. Students should understand the strategy he/she selected and be able to explain how it can efficiently produce accurate answers.</p>

Operations and Algebraic Thinking	Work with addition and subtraction equations
AR.Math.Content.1.OA.D.7	<p>Understand the meaning of the equal sign and determine if <i>equations</i> involving addition and subtraction are true or false</p> <p>For example: Which of the following <i>equations</i> are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, or $4 + 1 = 5 + 2$.</p>
AR.Math.Content.1.OA.D.8	<p>Determine the unknown whole number in an addition or subtraction equation relating three <i>whole numbers</i></p> <p>For example: Determine the unknown number that makes the equation true in each of the <i>equations</i> $8 + ? = 11$, $5 = _ - 3$, and $6 + 6 = _$</p>

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Number and Operations in Base Ten	Extend the counting sequence
AR.Math.Content.1.NBT.A.1	<ul style="list-style-type: none">• Count to 120, starting at any number less than 120• In this range, read and write numerals and represent a number of objects with a written numeral.

Number and Operations in Base Ten	Understand place value
AR.Math.Content.1.NBT.B.2	<p>Understand that the two digits of a two-digit number represent amounts of tens and ones</p> <p>Understand the following as special cases:</p> <ul style="list-style-type: none">• 10 can be thought of as a bundle of ten ones — called a "ten"• The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones• The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens and 0 ones
AR.Math.Content.1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$

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Numbers and Operations in Base Ten	Use place value understanding and properties of operations to add and subtract
AR.Math.Content.1.NBT.C.4	<p>Add within 100 using concrete models or drawings, relate the strategy used to a written expression or equation, and be able to explain the reasoning</p> <p>Note: Strategies should be based on <i>place-value</i>, properties of operations, and the relationship between addition and subtraction.</p>
AR.Math.Content.1.NBT.C.5	<p>Mentally find 10 more or 10 less than a given two-digit number, without having to count</p> <p>Note: Students should be able to explain the reasoning used.</p>
AR.Math.Content.1.NBT.C.6	<p>Subtract multiples of 10 from multiples of 10 (both in the range of 10-90) using concrete models or drawings, relate the strategy to a written method, and explain the reasoning used</p> <p>Note: Strategies should be based on <i>place value</i>, properties of operations, and the relationship between addition and subtraction.</p> <p>Note: <i>Differences</i> should be zero or positive.</p>

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Measurement and Data	Measure lengths indirectly and by iterating length units
AR.Math.Content.1.MD.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object
AR.Math.Content.1.MD.A.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps Note: Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Measurement and Data	Work with time and money
AR.Math.Content.1.MD.B.3	Tell and write time in hours and half-hours using analog and digital clocks Note: The intention of this standard is to continue the introduction of the concept with the goal of mastery by the end of third grade.
AR.Math.Content.1.MD.B.4 (New Standard)	Identify and know the <i>value</i> of a penny, nickel, dime, and quarter
AR.Math.Content.1.MD.B.5 (New Standard)	Count collections of like coins (pennies, nickels, and dimes)

Measurement and Data	Represent and interpret data
AR.Math.Content.1.MD.C.6	<ul style="list-style-type: none"> • Organize, represent, and interpret data with up to three categories, using tally tables, picture graphs and bar graphs • Ask and answer questions about the total number represented, how many in each category, and how many more or less are in one category than in another

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Geometry	Reason with shapes and their attributes
AR.Math.Content.1.G.A.1	Distinguish between defining <i>attributes</i> (e.g., triangles are closed and three-sided) versus non-defining <i>attributes</i> (e.g., color, orientation, overall size); build and draw shapes to possess defining <i>attributes</i>
AR.Math.Content.1.G.A.2	Compose two-dimensional shapes (e.g., rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (e.g., cubes, right <i>rectangular prisms</i> , right circular cones, and right circular cylinders) to create a composite shape Note: Students do not need to learn formal names such as “right <i>rectangular prism</i> ”.
AR.Math.Content.1.G.A.3	<ul style="list-style-type: none">• Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of• Describe the whole as two of, or four of, the shares• Understand for these examples that decomposing into more equal shares creates smaller shares