



# BROWNELL TALBOT

## Grade 1 Prioritized Math Standards

The prioritized standards listed align with both the NCTM (National Council for Teachers of Mathematics) and the Nebraska State Standards. The NCTM also includes a set of Process Standards for grades preschool through 12 that highlight mathematical processes that students draw on to acquire and use their content knowledge (see the link on the next page).

### Number & Operations

<p><b>Understand numbers, ways of representing numbers, relationships among numbers, and number systems</b></p>	<p>Demonstrate that each digit of a two-digit number represents amounts of tens and ones, knowing 10 can be considered as one unit made of ones which is called a “ten” and any two-digit number can be composed of some tens and some ones (e.g., 19 is one ten and nine ones, and 83 is 8 tens and 3 ones) and can be recorded as an equation (e.g., <math>19 = 10 + 9</math>).</p> <p>Compare two two-digit numbers by using symbols <math>&gt;</math>, <math>&lt;</math>, and <math>=</math>; justify the comparison based on the number of tens and ones.</p>
<p><b>Understand meanings of operations and how they relate to one another</b></p>	<p>Use the relationship of addition and subtraction to solve subtraction problems (e.g., find <math>12 - 9 = \underline{\quad}</math>, using the addition fact <math>9 + 3 = 12</math>).</p> <p>Determine the unknown whole number in an addition or subtraction equation, e.g., <math>7 + ? = 13</math>.</p>
<p><b>Compute fluently and make reasonable estimates</b></p>	<p>Fluently add and subtract within 20.</p> <p>Fluently add groups of tens and ones to existing numbers within 100, using concrete models, drawings, mental math, and strategies that reflect understanding of place value.</p> <p>Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers. (e.g., decomposing to make 10, <math>7 + 5 = 7 + 3 + 2 = 10 + 2 = 12</math>; using the commutative property to count on <math>2 + 6 = 6 + 2</math>, and using the associative property to make 10, <math>5 + 3 + 7 = 5 + (3 + 7) = 5 + 10</math>)</p>

### Algebra

<p><b>Understand patterns, relations, and functions</b></p>	<p>Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another.</p>
<p><b>Represent and analyze mathematical situations and structures using algebraic symbols</b></p>	<p>Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations.</p>
<p><b>Use mathematical models to represent and understand quantitative relationships</b></p>	<p>Solve real-life problems involving addition and subtraction within 20 in situations of addition to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, pictures, and equations with a symbol for the unknown number to represent the problem.)</p>

<b>Geometry</b>	
<b>Analyze characteristics and properties of two and three dimensional geometric shapes and develop mathematical arguments about geometric relationships</b>	Determine defining and non-defining attributes of two-dimensional shapes; build and draw shapes that match the given definition.
<b>Use visualization, spatial reasoning, and geometric modeling to solve problems</b>	Decompose circles and rectangles into two and four equal parts using the terms halves, fourths and quarters, and use the phrase half of, fourths of, and quarter of.
<b>Measurement</b>	
<b>Understand measurable attributes of objects and the units, systems, and processes of measurement</b>	Tell and write time to the hour, quarter and half hour using analog and digital clocks.
<b>Apply appropriate techniques, tools, and formulas to determine measurements</b>	Identify, name, and understand the value of coins relating to groups of twenty five, tens, fives, and ones  Solve real-life problems involving coins, using the cent symbol appropriately (e.g., if you have four dimes and two pennies, how many cents do you have?)
<b>Data Analysis &amp; Probability</b>	
<b>Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them</b>	Collect and analyze data in pictograph or bar graph form.
<b>Select and use appropriate statistical methods to analyze data</b>	Ask and answer questions about the total number of data points, how many in each category, and compare categories by identifying how many more or less are in a particular category.

**NCTM Process Standards: [brownell.edu/nctm](http://brownell.edu/nctm)**