



BROWNELL TALBOT

Algebra Prioritized 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	
Understand numbers, ways of representing numbers, relationships among numbers, and number systems	<p>Apply the understanding of large numbers and appropriately use exponential, scientific, and calculator notation</p> <p>Develop a deeper understanding of very large and very small numbers and of various representations of them</p>
Understand meanings of operations and how they relate to one another	<p>Understand and use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems.</p>
Compute fluently and make reasonable estimates	<p>Develop, analyze, and explain methods for solving problems in involving proportions, such as scaling and finding equivalent ratios</p>
Algebra	
Understand patterns, relations, & functions	<p>Identify functions as linear or nonlinear and contrast their properties from tables, graphs, or equations</p> <p>Generalize patterns using explicitly defined functions</p> <p>Understand relations and functions</p> <p>Interpret representations of functions of two variables</p>
Represent and analyze mathematical situations and structures using algebraic symbols	<p>Use symbolic algebra to represent situations and to solve problems, especially those that involve linear relationships</p> <p>Understand the meaning of equivalent forms of expressions, equations, inequalities, and relations</p> <p>Write equivalent forms of equations, linear inequalities, and systems of equations with 2 variables; solve with fluency-mentally or with paper and pencil in simple cases and using technology in all cases</p> <p>Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology</p>
Use mathematical models to represent and understand quantitative relationships	<p>Use symbolic expressions to represent relationships arising from various contexts</p>
Measurement	
Apply appropriate techniques, tools, and formulas to determine measurements	<p>Use analysis to check measurement computations</p>