

## Algebra I

Standard	Below Basic	Basic	Proficient	Advanced
<b>Algebra I</b>	Students who perform at this level <b>have not</b> demonstrated mastery in academic performance, thinking abilities, and application of understandings that reflect the knowledge and skills specified by the grade/course level content standards and are not prepared for the next level of study.	Students who perform at this level demonstrate <b>partial</b> mastery in academic performance, thinking abilities, and application of understandings that reflect the knowledge and skills specified by the grade/course level content standards and are minimally prepared for the next level of study.	Students who perform at this level demonstrate <b>mastery</b> in academic performance, thinking abilities, and application of understandings that reflect the knowledge and skills specified by the grade/course level content standards and are well prepared for the next level of study.	Students who perform at this level demonstrate <b>superior</b> mastery in academic performance, thinking abilities, and application of understandings that reflect the knowledge and skills specified by the grade/course level content standards and are significantly prepared for the next level of study.
<b>Mathematical Processes Algebra I</b>	The student has not demonstrated an ability to translate between representations of functions and to determine and interpret slope.	The student translates an algebraic representation of a function to a graphical representation. The student determines and interprets the slope of a linear function given its graph.	The student applies mathematical reasoning in problem solving, including contextual problems. The student translates a graphical representation of a function to an algebraic representation. The student determines and interprets slope of linear function given its equation in standard or slope-intercept form.	The student justifies steps in an algebraic solution. The student translates a verbal or numerical representation of a function to an algebraic or graphical representation (and vice versa.) The student determines and interprets slope involving contextual problems.
<b>Number and Operations Algebra I</b>	The student has not demonstrated the skills necessary to perform operations with rational numbers and algebraic expressions.	The student operates with square roots involving integers and monomial algebraic expressions. The student expresses numbers in scientific notation.	The student operates with square roots involving rational numbers and algebraic expressions. The student solves problems involving scientific notation.	The student operates with radicals involving rational numbers and algebraic expressions. The student solves contextual problems involving scientific notation.

<p><b>Algebra Algebra I</b></p>	<p>The student has not demonstrated a procedural understanding of algebra. The student has demonstrated only partial mastery of solving equations, graphing, and properties of functions.</p>	<p>The student extends arithmetic and geometric patterns. The student understands the basic procedures of algebra. The student combines simple algebraic expressions involving addition and/or multiplication. The student solves linear equations and inequalities. The student graphs linear equations and inequalities in slope-intercept form. The student solves a quadratic equation using a graph. The student solves a system of linear equations. The student identifies domain and range from a set of ordered pairs or from a table. The student translates between different representations of linear functions. The student finds the GCF of the terms of a polynomial and factors quadratic expressions using concrete models.</p>	<p>The student uses algebraic thinking in generalizing familiar patterns. The student simplifies basic algebraic expressions using multiple operations. The student solves and graphs linear equations and absolute value equations. The student solves quadratic equations. The student solves systems of linear equations and inequalities. The student identifies domain and range from a graph and determines if a relation is a function given any representation. The student evaluates a function at a specified rational value. The student translates between different representations of linear and nonlinear functions. The student factors quadratic expressions. The student manipulates formulas and solves literal equations.</p>	<p>The student uses algebraic thinking in generalizing non-routine patterns. The student writes, solves, and graphs compound inequalities and absolute-value inequalities. The student constructs and solves systems of linear equations and inequalities by various methods. The student understands and uses relations and functions and various representations to solve contextual problems. The student factors polynomials. The student identifies and analyzes distinguishing properties of linear and nonlinear functions.</p>
<p><b>Geometry and Measurement Algebra I</b></p>	<p>The student has not demonstrated a consistent ability to use algebraic reasoning in geometric applications.</p>	<p>The student solves problems using the Pythagorean Theorem. The student uses the number line to find the midpoint and distance between two points.</p>	<p>The student explains and applies the appropriate strategy to determine the length and midpoint of a segment or the area of a figure in a coordinate plane. The student solves contextual problems using the Pythagorean Theorem.</p>	<p>The student uses algebraic reasoning in applications involving geometric formulas and contextual problems. The student applies and converts appropriate units of measure contextually.</p>

<b>Data Analysis, Statistics, and Probability Algebra I</b>	The student demonstrates little or no ability to use statistical thinking to draw conclusions and make predictions.	The student determines a line that fits linear data. The student determines simple theoretical and/or experimental probability.	The student draws conclusions and makes predictions using statistical thinking. The student identifies the effect on the measures of central tendencies when data values are changed. The student recognizes the relationship between the probability of an event and the probability of its complement.	The student analyzes and justifies conclusions and predictions made from statistical thinking.
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