Algebra:

9-12.A.1.1 (Comprehension) Write equivalent forms of algebraic expressions using properties of the set of real numbers.

- I can apply the order of operations to simplify algebraic expressions. (It is not an
- equation.). (9-12.A.1.1)
- I can explain the difference between an equation and an expression. (9-12.A.1.1)
- I can combine like terms in an expression. (It is not an equation.). (9-12.A.1.1)
- I can explain the substitution property. (9-12.A.1.1)
- Given the values of variables, I can evaluate algebraic expressions using the substitution property. (9-12.A.1.1)
- I can multiply powers having the same base to simplify algebraic expressions. (9-12.A.1.1) & (9-12.N.2.1)
- I can divide powers having the same base to simplify algebraic expressions. (9-12.A.1.1) & (9-12.N.2.1)
- I can compute a power of a power to simplify algebraic expressions. (9-12.A.1.1) & (9-12.N.2.1)
- I can find the power of a product to simplify algebraic expressions. (9-12.A.1.1) & (9-12.N.2.1)
- I can apply the zero exponent rule to simplify algebraic expressions. (9-12.A.1.1) & (9-12.N.2.1)
- I can apply the negative exponent rule to simplify algebraic expressions. (9-12.A.1.1)
- I can apply the power of a quotient to simplify algebraic expressions. (9-12.A.1.1)
- I can multiply polynomials to simplify algebraic expressions. (9-12.A.1.1)
- I can apply the distributive property to simplify algebraic expressions. (9-12.A.1.1)
- I can factor (greatest common factor) to simplify algebraic expressions. (9-12.A.1.1)
- I can factor (difference of perfect squares / two squares) to simplify algebraic expressions. (9-12.A.1.1)
- I can factor (trinomials) to simplify algebraic expressions. (9-12.A.1.1)
- I can factor (factor by grouping) to simplify algebraic expressions. (9-12.A.1.1)
- I can write algebraic expressions from verbal phrases. (9-12.A.1.1)

9-12.A.2.1. (Comprehension) Use algebraic properties to transform multi-step, single variable, and first-degree equations.

- I can solve equations that have all the variables on one side. (9-12.A.2.1)
- I can solve equations that have variables on both sides. (9-12.A.2.1)
- I can solve equations that require more than two steps to solve. (9-12.A.2.1)
- I can explain the difference between an equation and an inequality. (9-12.A.2.1)
- I can explain the transitive property of equality. (9-12.A.2.1)
- I can solve algebraic equations using the transitive property. (9-12.A.2.1)
- I can explain the reflexive property of equality. (9-12.A.2.1)
- I can explain the symmetric property of equality. (9-12.A.2.1)
- I can use the symmetric property of equality to solve algebraic equations. (9-12.A.2.1)
- I can explain the substitution property of equality. (9-12.A.2.1)
- I can use the substitution property of equality to solve algebraic equations. (9-12.A.2.1)
- I can explain the transitive property of equality. (9-12.A.2.1)
- I can use the transitive property of equality to solve algebraic equations. (9-12.A.2.1)

- I can explain the commutative property of addition and multiplication. (9-12.A.2.1)
- I can use the commutative property of addition and multiplication to solve algebraic equations. (9-12.A.2.1)
- I can explain the associative property of addition and multiplication. (9-12.A.2.1)
- I can use the associative property of addition and multiplication to solve algebraic equations. (9-12.A.2.1)
- I can explain the identity property of addition and multiplication. (9-12.A.2.1)
- I can use the identity property of addition and multiplication to solve algebraic equations. (9-12.A.2.1)
- I can explain the inverse property of addition and multiplication. (9-12.A.2.1)
- I can use the inverse property of addition and multiplication to solve algebraic equations. (9-12.A.2.1)

9-12.A.2.2. (Application) Use algebraic properties to transform multi-step, single variable, and first-degree inequalities and represent solutions using a number line.
- I can solve an inequality. (9-12.A.2.2)
- I can graph the solution to an inequality. (9-12.A.2.2)
- I can explain the difference between an equation and an inequality. (9-12.A.2.2)
- I can multiply or divide by a negative number by reversing the inequality. (9-12.A.2.2)
- I can explain the transitive property of inequality. (9-12.A.2.2)
- I can solve algebraic inequalities using the transitive property. (9-12.A.2.2)
- I can explain the symmetric property of equality. (9-12.A.2.2)
- I can use the symmetric property of inequality to solve algebraic inequalities. (9-12.A.2.2)
- I can explain the transitive property of inequalities. (9-12.A.2.2)
- I can use the transitive property of equality to solve algebraic inequalities. (9-12.A.2.2)
- I can explain the commutative property of addition and multiplication. (9-12.A.2.2)
- I can use the commutative property of addition and multiplication to solve algebraic equations. (9-12.A.2.2)
- I can explain the associative property of addition and multiplication. (9-12.A.2.2)
- I can use the associative property of addition and multiplication to solve algebraic inequalities. (9-12.A.2.2)
- I can explain the identity property of addition and multiplication. (9-12.A.2.2)
- I can use the identity property of addition and multiplication to solve algebraic inequalities. (9-12.A.2.2)
- I can explain the inverse property of addition and multiplication. (9-12.A.2.2)
- I can use the inverse property of addition and multiplication to solve algebraic inequalities. (9-12.A.2.2)

9-12.A.3.1 (Application) Create linear models to represent problem situations.
- I can write a linear equation/model from a statement or problem. (9-12.A.3.1)
- I can define slope. (9-12.A.3.1)
- I can find slope. (9-12.A.3.1)
- I can explain the meaning of the x-intercept. (9-12.A.3.1)
- I can find the x-intercept. (9-12.A.3.1)
- I can explain the meaning of the y-intercept. (9-12.A.3.1)

- I can find the y-intercept. (9-12.A.3.1)
- I can make predictions using the linear equation. (9-12.A.3.1)

9-12.A.3.2 (Comprehension) Distinguish between linear and nonlinear models.
- I can identify a linear equation/model. (9-12.A.3.2)
- I can identify a linear graph. (9-12.A.3.2)
- I can identify an exponential equation/model. (9-12.A.3.2)
- I can identify an exponential graph. (9-12.A.3.2)
- I can identify a quadratic equation/model. (9-12.A.3.2)
- I can identify a quadratic graph. (9-12.A.3.2)
- I can explain the difference between linear growth and exponential growth. (9-12.A.3.2)
- I can explain the difference between exponential growth and exponential decay. (9-12.A.3.2)

9-12.A.4.1 (Application) Use graphs, tables, and equations to represent linear functions.
- I can define input/domain and output/range. (9-12.A.4.1)
- I can use standard form ($Ax+By=C$) to develop a table. (9-12.A.4.1)
- I can use point-slope form ($y-y_1 =m (x-x_1)$) to develop a table. (9-12.A.4.1)
- I can use slope intercept form ($y = mx + b$) to develop a table. (9-12.A.4.1)
- I can use standard form ($Ax+By=C$) to construct a graph. (9-12.A.4.1)
- I can use point-slope form ($y-y_1 =m (x-x_1)$) to construct a graph. (9-12.A.4.1)
- I can use slope intercept form ($y = mx + b$) to construct a graph. (9-12.A.4.1)
- I can use function notation f(x). (9-12.A.4.1)
- Given two points, I can write the equation of the line containing the two points. (9-12.A.4.1)
- Given any form of a linear equation, I can write it in the form $f(x) = mx + b$. (9-12.A.4.1)

Geometry:
9-12.G.1.1 (Application) Apply the properties of triangles and quadrilaterals to find unknown parts.
- I can find the length of a horizontal segment on the coordinate plane. (9-12.G.1.1)
- I can find the midpoint of a horizontal segment on the coordinate plane. (9-12.G.1.1)
- I can find the length of a vertical segment on the coordinate plane. (9-12.G.1.1)
- I can find the midpoint of a vertical segment on the coordinate plane. (9-12.G.1.1)
- I can find the length of an oblique segment on the coordinate plane. (9-12.G.1.1)
- I can find the midpoint of an oblique segment on the coordinate plane. (9-12.G.1.1)
- I can identify the value of the slope of any line on the coordinate plane. (9-12.G.1.1)
- Given two lines in the coordinate plane, I can use slope to determine if the lines are parallel. (9-12.G.1.1)
- Given two lines in the coordinate plane, I can use slope to determine if the lines are perpendicular. (9-12.G.1.1)
- I can identify vertical angles. (9-12.G.1.1)
- I can solve problems using vertical angles. (9-12.G.1.1)
- I can identify complementary angles. (9-12.G.1.1)
- I can solve problems using complementary angles. (9-12.G.1.1)

- I can identify supplementary angles. (9-12.G.1.1)
- I can solve problems using supplementary angles. (9-12.G.1.1)
- I can identify linear pairs. (9-12.G.1.1)
- I can solve problems using linear pairs. (9-12.G.1.1)
- I can identify adjacent angles. (9-12.G.1.1)
- I can solve problems using adjacent angles. (9-12.G.1.1)
- Given a complex diagram, I can solve for the missing lengths of a segment or missing measures of angles. (9-12.G.1.1)
- I can identify corresponding angles formed when two lines are cut by a transversal. (9-12.G.1.1)
- I can identify alternate interior angles formed when two lines are cut by a transversal. (9-12.G.1.1)
- I can identify consecutive interior angles formed when two lines are cut by a transversal. (9-12.G.1.1)
- I can identify the relationships that occur when two parallel lines are cut by a transversal. (9-12.G.1.1)
- I can identify the relationships between two lines: parallel, intersecting and skew. (9-12.G.1.1)
- Given the measure of one angle when two parallel lines are cut by a transversal, I can calculate the measures of all of the other angles. (9-12.G.1.1)
- I can use the symbols for perpendicular and parallel. (9-12.G.1.1)
- I can use medians in a triangle to solve problems. (9-12.G.1.1)
- I can use angle bisectors in a triangle to solve problems. (9-12.G.1.1)
- I can use altitudes in a triangle to solve problems. (9-12.G.1.1)
- I can identify the characteristics of a quadrilateral. (9-12.G.1.1)
- Given a quadrilateral, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of a rectangle. (9-12.G.1.1)
- Given a rectangle, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of a rhombus. (9-12.G.1.1)
- Given a rhombus, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of a square. (9-12.G.1.1)
- Given a square, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of a parallelogram. (9-12.G.1.1)
- Given a parallelogram, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of a trapezoid. (9-12.G.1.1)
- Given a trapezoid, I can find the value of its missing parts. (9-12.G.1.1)
- I can identify the characteristics of an isosceles trapezoid. (9-12.G.1.1)
- Given an isosceles trapezoid, I can find the value of its missing parts. (9-12.G.1.1)
- I can classify special quadrilaterals based on their angle measures, side characteristics, and diagonal characteristics. (quadrilateral, rectangle, rhombus, square, parallelogram, trapezoid, and isosceles trapezoid.) (9-12.G.1.1)
- I can find the value of the missing side of any right triangle in decimal form.
- Given the length of one side of a 45°-45°-90° triangle, I can calculate the length of the other two sides. (9-12.G.1.1)
- Given the length of one side of a 30°-60°-90° triangle, I can calculate the length of the other two sides. (9-12.G.1.1)

- Given the measures of 3 line segments, I can determine if the line segments will form a triangle. (9-12.G.1.1)
- Given the lengths of the three sides of a triangle, I can determine if the triangle is a right triangle. (9-12.G.1.1)
- Given the lengths of the three sides of a triangle, I can determine if the triangle is an obtuse triangle. (9-12.G.1.1)
- Given the lengths of the three sides of a triangle, I can determine if the triangle is an acute triangle. (9-12.G.1.1)
- I can classify triangles by the number of congruent sides. (9-12.G.1.1)
- I can classify triangles by the measures of the angles. (9-12.G.1.1)

9-12.G.1.2 (Application) Identify and apply relationships among triangles.
- I can determine if two triangles are congruent by SSS. (9-12.G.1.2)
- I can determine if two triangles are congruent by SAS. (9-12.G.1.2)
- I can determine if two triangles are congruent by ASA. (9-12.G.1.2)
- I can determine if two triangles are congruent by AAS. (9-12.G.1.2)
- I can determine if two right triangles are congruent by HL. (9-12.G.1.2)
- I can determine if two triangles are similar by SSS~. (9-12.G.1.2)
- I can determine if two triangles are similar by SAS~. (9-12.G.1.2)
- I can determine if two triangles are similar by AA~. (9-12.G.1.2)

9-12.G.2.1 (Analysis) Recognize the relationship between a three-dimensional figure and its two-dimensional representation.
- Given the two dimensional representation of a 3-dimensional shape, I can determine the solid. (9-12.G.2.1)
- Given a prism, I can draw its net. (9-12.G.2.1)
- Given a pyramid, I can draw its net. (9-12.G.2.1)
- Given a cylinder, I can draw its net. (9-12.G.2.1)
- Given a cone, I can draw its net. (9-12.G.2.1)

9-12.G.2.2 (Application) Reflect across vertical or horizontal lines, and translate two dimensional figures.
- I can reflect/flip figures over a line. (9-12.G.2.2)
- I can draw line(s) of symmetry on a plane figure. (9-12.G.2.2)
- I can translate/slide figures and identify the components. (9-12.G.2.2)
- I can rotate figures. (9-12.G.2.2)
- Given the coordinates of the pre-image, I can state the coordinates of the image after a reflection over a line. (9-12.G.2.2)
- Given the coordinates of the pre-image, I can state the coordinates of the image after a translation. (9-12.G.2.2)
- Given the coordinates of the pre-image, I can state the coordinates of the image after a rotation. (9-12.G.2.2)
- Given the coordinates of the pre-image, I can state the coordinates of the image after a composite transformation of reflections/flips and translations/slides. (9-12.G.2.2)

9-12.G.2.3. (Application) Use proportions to solve problems.

- I can write a proportion. (9-12.G.2.3)
- I can solve a proportion. (9-12.G.2.3)
- I can use a proportion to solve application problems. (9-12.G.2.3)
- I can use a proportion to find the missing length of a side in similar polygons. (9-12.G.2.3)
- I can use a proportion to find the perimeter of a similar polygon. (9-12.G.2.3)

Measurement:
9-12.M.1.1 (Comprehension) Choose appropriate unit label, scale, and precision.
- I can choose an appropriate unit of measure for each situation. (9-12.M.1.1)
- I can choose an appropriate scale for histograms. (9-12.M.1.1)
- I can choose an appropriate scale for scatterplots. (9-12.M.1.1)
- I can choose an appropriate scale for linear function graphs. (9-12.M.1.1)
- I can choose an appropriate scale for box and whisker plots. (9-12.M.1.1)
- I can choose the commonly accepted precision of a measurement and/or calculation. (9-12.M.1.1)

9-12.M.1.2 (Comprehension) Use suitable units when describing rate of change.
- I can use appropriate units to describe slope. (9-12.M.1.2)
- I can interpret the meaning of the slope for a problem/situation when given the equation of a line of best fit. (9-12.M.1.2)
- I can interpret the meaning of the slope for a problem/situation when given the graph. (9-12.M.1.2)

9-12.M.1.3 (Application) Use formulas to find perimeter, circumference, and area to solve problems involving common geometric figures.
- I can find the perimeter of any polygon. (9-12.M.1.3)
- I can find the circumference without being given the formula. (9-12.M.1.3)
- I can find the area of any circle without being given the formula. (9-12.M.1.3)
- I can find the area of any square without being given the formula. (9-12.M.1.3)
- I can find the area of any rectangle without being given the formula. (9-12.M.1.3)
- I can find the area of any triangle without being given the formula. (9-12.M.1.3)
- I can solve measurement problems without pictorial information. (9-12.M.1.3)
- Given the perimeter, I can solve for missing parts. (9-12.M.1.3)
- Given the area, I can solve for missing parts. (9-12.M.1.3)
- o I can find the perimeter/circumference of common figures (circle, square, rectangle, triangle) on the coordinate plane where at least one side is parallel or perpendicular to the x-axis.
- o I can find the area of common figures (circle, square, rectangle, triangle) on the coordinate plane where at least one side is parallel or perpendicular to the x-axis.

Number Sense:
9-12.N.1.1 (Comprehension) Identify multiple representations of a real number.
- I can classify a real number as rational or irrational. (9-12.N.1.1)
- I can identify integers. (9-12.N.1.1)
- I can identify whole numbers. (9-12.N.1.1)

- I can identify natural numbers. (9-12.N.1.1)
- I can write any rational number as a fraction or a decimal. (9-12.N.1.1)

9-12.N.1.2 (Comprehension) Apply the concept of place value, magnitude, and relative magnitude of real numbers.
- I can find a real number between any two real numbers. (9-12.N.1.2)
- I can arrange real numbers in increasing or decreasing order. (9-12.N.1.2)
- I can compare real numbers written in a variety of forms (square roots / decimals / scientific notation / fractions). (9-12.N.1.2)
- I can round to a specific place value. (9-12.N.1.2)

9-12.N.2.1 (Comprehension) Add, subtract, multiply, and divide real numbers including integral exponents.
- ** covered in Algebra 1.1
- I can evaluate complex fractions. (9-12.N.2.1)

9-12.N.3.1 (Analysis) Use estimation strategies in problem situations to predict results and to check the reasonableness of results.
- I can round numbers to estimate the result of a problem situation. (9-12.N.3.1)
- I can estimate the answer to a problem to check the reasonableness of my calculated answer. (9-12.N.3.1)
- I can find the perimeter of irregular shapes using estimation strategies. (9-12.N.3.1)
- I can find the area of irregular shapes using estimation strategies. (9-12.N.3.1)
- I can find the volume of irregular shapes using estimation strategies. (9-12.N.3.1)
- I can estimate the value (to an interval) of a radical. (9-12.N.3.1)
  - To an interval = between two numbers

9-12.N.3.2 (Comprehension) Select alternative computational strategies and explain the chosen strategy.
- I can mentally use the commutative property to rearrange numbers to find the sum. (9-12.N.3.2)
- I can mentally use the associative property to group numbers to find the sum. (9-12.N.3.2)
- I can mentally use the commutative property to rearrange numbers to find the product. (9-12.N.3.2)
- I can mentally use the associative property to group numbers to find the product. (9-12.N.3.2)
- I can use the distributive property to compute the product of two numbers. (9-12.N.3.2)
- I can justify the operational shortcuts I use for computational procedures. (9-12.N.3.2)

Statistics and Probability:
9-12.S.1.1 (Analysis) Draw conclusions from a set of data.
- I can determine the mean of a data set. (9-12.S.1.1)
- I can determine the median of a data set. (9-12.S.1.1)
- I can determine the mode of a data set. (9-12.S.1.1)
- I can determine the range of a data set. (9-12.S.1.1)

- I can determine the interquartile range of a data set. (9-12.S.1.1)
- I can determine which statistical value (mean, median, mode) is appropriate for a specific situation. (9-12.S.1.1)
- I can find the five-number summary (minimum, first quartile, median, third quartile, and maximum) of a data set. (9-12.S.1.1)
- I can identify an outlier in a data set. (9-12.S.1.1)

9-12.S.1.2 (Comprehension) Compare multiple one-variable data sets, using range, interquartile range, mean, mode, and median.
- I can use the mean to compare two or more one-variable data sets. (9-12.S.1.2)
- I can use the mode to compare two or more one-variable data sets. (9-12.S.1.2)
- I can use the median to compare two or more one-variable data sets. (9-12.S.1.2)
- I can use the range to compare two or more one-variable data sets. (9-12.S.1.2)
- I can use the standard deviation to compare two or more one-variable data sets.

9-12.S.1.3 (Analysis) Represent a set of data in a variety of graphical forms and draw conclusions.
- I can make a frequency table (tally) using a set of data. (9-12.S.1.3)
- I can draw conclusions from a frequency table (tally). (9-12.S.1.3)
- I can make a box-and-whisker plot using a set of data. (9-12.S.1.3)
- I can draw conclusions from a box-and-whisker plot (9-12.S.1.3)
- I can make a histogram plot using a set of data. (9-12.S.1.3)
- I can draw conclusions from a histogram (9-12.S.1.3)
- I can make a stem-and-leaf plot using a set of data. (9-12.S.1.3)
- I can draw conclusions from a stem-and-leaf plot (9-12.S.1.3)
- I can make a scatterplot plot using a set of data. (9-12.S.1.3)
- I can draw conclusions from a scatterplot plot (9-12.S.1.3)
- I can draw a line of best fit on a scatterplot. (9-12.S.1.3)
- I can use a line of best fit to make appropriate predictions. (9-12.S.1.3)
- I can determine the most appropriate graphical form to display a data set. (9-12.S.1.3)
- I can draw conclusions from a graphical display. (9-12.S.1.3)

9-12.S.2.1 (Knowledge) Distinguish between experimental and theoretical probability.
- I can explain experimental probability (the ratio of successes to total trials). (9-12.S.2.1)
- I can explain theoretical probability (the ratio of favorable outcomes to possible outcomes). (9-12.S.2.1)
- I can determine if a given probability situation is experimental or theoretical. (9-12.S.2.1)

9-12.S.2.2 (Comprehension) Predict outcomes of simple events using given theoretical probabilities.
- I can determine the sample space for a given situation. (9-12.S.2.2)
- I can calculate basic theoretical probabilities based on given situations. (9-12.S.2.2)
- I can make predictions based on given probabilities. (9-12.S.2.2)
- I can find the geometric probability ((favorable measurement) ÷ (total measurement)) in a problem situation. (9-12.S.2.2)

- o I can conduct a simulation and explain why experimental results typically vary from the expected theoretical results.