


# CCSU Guaranteed, Viable Curriculum

## K-12 Power Standards and Power Indicators

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Power Standards and Power Indicators

# MATH: Kindergarten

Math Power Standard #1 Numbers and Operations	Math Power Standard #2 Geometric Figures	Math Power Standard #3 Units of Measure	Math Power Standard #4 Patterns, Equations, and Inequalities	Math Power Standard #5 Data	Math Power Standard #6 Probability	Math Power Standard #7 Problem Solving
Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)	Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)	Students know and use units of measure. (Aligns with VT Standard 7.7)	Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with VT Standard 7.8)	Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)	Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)	Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10)
a) Rote count from 0 to 100 b) Name numbers to 50 c) Count a set of objects to 50 d) Use strategies to add and subtract e) Count back from 15 to 0 f) Recognize and name coins  <i>Aligns with VT GEs MK: 1, 2, 3, 4, 5</i>	a) Recognize and name triangles, rectangles, circles, squares b) Sort and classify objects by one attribute  <i>Aligns with VT GE MK: 9</i>	a) Express passage of time to sequence events b) Identify clock and calendar as tools to measure time  <i>Aligns with VT GEs MK: 15, 16, 18</i>	a) Extend a variety of repeating patterns with shapes, sounds, letters, numbers, etc... b) Solve equations for numbers less than 10 using models, manipulatives, or verbal explanations  <i>Aligns with VT GEs MK: 19, 22</i>	a) Interpret and analyze data from tally charts, bar graphs, and picture graphs  <i>Aligns with VT GEs MK: 23, 24, 25</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MK: 7, 30</i>

Math Power Standard #1 Numbers and Operations	Math Power Standard #2 Geometric Figures	Math Power Standard #3 Units of Measure	Math Power Standard #4 Patterns, Equations, and Inequalities	Math Power Standard #5 Data	Math Power Standard #6 Probability	Math Power Standard #7 Problem Solving
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a) Identify and name the value of each digit in a two-digit number b) Order and compare numbers up to 100 c) Read and write numbers to 100 d) Count by 5's and 10's up to 100 beginning with 0 e) Solve addition and subtraction facts f) Count mixed coins to \$1.00 g) Identify $\frac{1}{2}$ , $\frac{1}{3}$ , and $\frac{1}{4}$ of a region and/or set  <i>Aligns with VT GEs M1: 1, 2, 3, 4, 5</i>	a) Sort and classify 2-dimensional geometric figures (pattern block shapes) by two or more attributes  <i>Aligns with VT GE M1: 9</i>	a) Tell time to the half-hour b) Measure length and weight using non-standard units c) Identify a tool to measure volume  <i>Aligns with VT GEs M1: 15, 16, 18</i>	a) Identify growing and repeating patterns with objects, shapes, numbers, etc... b) Write equations for numbers less than 20  <i>Aligns with VT GEs M1: 19, 22</i>	a) Record and count tally marks b) Interpret and analyze graphs, tables, and charts  <i>Aligns with VT GEs M1: 23, 24</i>	a) Explore the probability of an event as more likely or less likely  <i>Aligns with VT GE M1: 27</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M1: 7, 30</i>

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a) Identify and name the value of each digit in a three-digit number b) Express 10 more / 10 less and 100 more/ 100 less c) Estimate and solve 2-digit addition and subtraction problems d) Read and write numbers to 999 e) Use halves, thirds, and fourths to identify and create a whole and a set f) Count mixed coins to \$1.99 g) Make change from \$1.00 h) Know addition and subtraction facts  <i>Aligns with VT GEs M2: 1, 2, 3, 5, 6</i>	a) Sort and classify 3-dimensional geometric figures b) Identify properties of 2-dimensional geometric figures c) Determine perimeter of a polygon using models or manipulatives  <i>Aligns with VT GEs M2: 9, 11, 14</i>	a) Convert between inches and feet; centimeters and meters; minutes and hours b) Tell time to the five-minute  <i>Aligns with VT GEs M2: 15, 16</i>	a) Solve function tables (Frames & Arrows: Everyday Math) for output using addition and/or subtraction b) Solve for missing addends  <i>Aligns with VT GEs M2: 19, 22</i>	a) Interpret and analyze data from a graph, table, chart, and line plot b) Collect and organize data to create a table or chart  <i>Aligns with VT GEs M2: 23, 24, 25, 28</i>	a) Explore the probability of an event as certain, impossible, or equally likely b) Identify the number of combinations using counting techniques (tree diagram, organized list, table)  <i>Aligns with VT GEs M2: 26, 27</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M2: 7, 30</i>

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<ul style="list-style-type: none"> <li>a) Identify and name the value of each digit in a four-digit number</li> <li>b) Read and write numbers up to 9,999</li> <li>c) Estimate and compute addition and subtraction problems involving regrouping</li> <li>d) Solve multiplication problems using the area model, repeated addition, and equal groups</li> <li>e) Identify sixths and eighths of a whole and set</li> <li>f) Compare fractions (halves, thirds, fourths)</li> <li>g) Find equivalent fractions for halves, thirds, and fourths</li> <li>h) Use decimals in the context of money</li> </ul> <p><i>Aligns with VT GEs M3:1, 2, 3, 4</i></p>	<ul style="list-style-type: none"> <li>a) Determine area of a rectangle on a grid</li> <li>b) Determine perimeter of a polygon</li> <li>c) Use properties of geometric figures to distinguish among them</li> </ul> <p><i>Aligns with VT GEs M3: 9, 14</i></p>	<ul style="list-style-type: none"> <li>a) Convert linear measurements within the US system</li> <li>b) Convert passages of time (hours-days, days-weeks, days-years)</li> <li>c) Measure length to the quarter-inch</li> </ul> <p><i>Aligns with VT GE M3: 15</i></p>	<ul style="list-style-type: none"> <li>a) Find missing elements in an open number sentence</li> <li>b) Determine the rule for a constant rate of change (in/out boxes)</li> </ul> <p><i>Aligns with VT GEs M3: 19, 20, 22</i></p>	<ul style="list-style-type: none"> <li>a) Generate questions about a data set</li> <li>b) Identify the mode of a data set</li> <li>c) Create and interpret appropriate representations for a data set (bar graphs, line plots, tally charts, tables)</li> </ul> <p><i>Aligns with VT GEs M3: 23, 24, 25</i></p>	<ul style="list-style-type: none"> <li>a) Identify the probability of an event as more likely or less likely</li> </ul> <p><i>Aligns with VT GE M3: 27</i></p>	<ul style="list-style-type: none"> <li>a) Approach a problem correctly</li> <li>b) Provide a solution with evidence</li> <li>c) Communicate mathematically</li> </ul> <p><i>Aligns with VT GEs M3: 7, 30</i></p>



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<p>a) Regroup across place values, including decimals, to solve addition and subtraction problems</p> <p>b) Estimate and solve 2-digit by 2-digit multiplication problems</p> <p>c) Estimate and solve division problems with 1-digit divisors with no remainder</p> <p>d) Compare and order fractions (<math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{1}{6}</math>, <math>\frac{1}{8}</math>, <math>\frac{1}{10}</math>)</p> <p>e) Compare and order decimals (tenths and hundredths)</p> <p>f) Add and subtract fractions with like denominators</p> <p>g) Know multiplication facts, 0-12</p> <p><i>Aligns with VT GEs M4: 1, 2, 3, 4</i></p>	<p>a) Classify acute, right, and obtuse angles</p> <p>b) Identify faces, edges, and vertices of 3-dimensional figures</p> <p>c) Identify congruent figures</p> <p>d) Identify and use scales on a map</p> <p>e) Plot data on a Cartesian Coordinate grid in Quadrant I</p> <p>f) Determine area of polygons as they relate to rectangles</p> <p>g) Classify polygons</p> <p><i>Aligns with VT GEs M4: 9, 11, 12, 14, 18</i></p>	<p>a) Determine elapsed time</p> <p>b) Convert linear measurements within the metric system (mm, cm, m, km)</p> <p><i>Aligns with VT GEs M4: 15, 16</i></p>	<p>a) Write a rule to find the next term in a pattern using words and/or algebraic notation</p> <p>b) Identify equivalences between two expressions involving variables and parentheses</p> <p><i>Aligns with VT GEs M4: 19, 21, 22</i></p>	<p>a) Identify the range and median of a data set</p> <p>b) Analyze data to predict an outcome</p> <p>c) Interpret data on a circle graph and line plot</p> <p><i>Aligns with VT GEs M4: 23, 24, 25</i></p>	<p>a) Find theoretical probability as a part to a whole</p> <p>b) Find combinations using counting techniques (tree diagram, organized list, and table)</p> <p><i>Aligns with VT GEs M4: 26, 27</i></p>	<p>a) Approach a problem correctly</p> <p>b) Provide a solution with evidence</p> <p>c) Communicate mathematically</p> <p><i>Aligns with VT GEs M4: 7, 30</i></p>

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a) Add and subtract proper fractions b) Convert between improper and mixed numbers c) Use percent benchmarks of 10%, 25%, 50%, 75% and 100% d) Order and compare decimals to thousandths e) Locate integers on a number line f) Demonstrate understanding of remainders in division with 2-digit divisors g) Accurately multiply and divide multi-digit whole numbers h) Distinguish between prime and composite numbers i) Know division facts having divisors 1–12 j) Add and subtract decimals to hundredths k) Apply conventions of order of operations including grouping symbols  <i>Aligns with VT GEs M5: 1,2,3,4, 6</i>	a) Classify types of triangles and quadrilaterals by sides and angles b) Identify and describe pyramids and cones c) Determine area of right triangles d) Determine volume of cubes e) Plot points on all 4 quadrants of a rectangular coordinate system  <i>Aligns with VT GEs M5: 9,11, 14, 8</i>	a) Find measures of angles using protractors b) Solve problems using elapsed time  <i>Aligns with VT GE M5: 15</i>	a) Write a rule for a specified term using words and/or algebraic notation in a pattern b) Write and evaluate algebraic expressions with 2 operations ( $2x + 7$ ) c) Solve one-step equations with whole number coefficients and solutions ( $3a = 21$ ) d) Given a set of possible solutions, determine the correct solution of a two step equation  <i>Aligns with VT GEs M5: 19, 21, 22</i>	a) Interpret data on line graphs, pictographs, line plots, and histograms b) Identify the appropriate representation to display a set of data c) Identify the mean in a data set  <i>Aligns with VT GEs M5: 23, 24, 25</i>	a) Determine the possible outcomes in a probability situation b) Find experimental probability and express as a fraction  <i>Aligns with VT GEs M5: 26, 27</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M5: 7, 30</i>

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a) Perform multiple operations on fractions b) Operate on decimals c) Understand percent of a whole (0-100%) d) Compare two numbers using rates and ratios e) Add and subtract integers f) Compare and order rational numbers g) Demonstrate understanding of powers of numbers h) Apply properties of numbers including greatest common factor, least common multiple, commutative and associative i) Apply conventions of order of operations including grouping symbols  <i>Aligns with VT GEs M6: 1, 2, 3</i>	a) Demonstrate congruency using angle measures and side lengths b) Apply properties of similarity: scale factor's effect on linear measures c) Find area of quadrilaterals and triangles using formulas d) Find volume of rectangular prisms e) Use circle measures (radius, diameter, and circumference)  <i>Aligns with VT GEs M6: 9, 12, 14</i>	a) Label units when finding perimeter, area, and volume b) Convert units within systems  <i>Aligns with VT GE M6: 15</i>	a) Generalize linear relationships in words or symbols b) Identify a constant rate of change for tables and graphs c) Evaluate expressions using order of operations consistent with this grade level d) Solve two step equations ( $ax \pm b = c$ , where a, b, and c are whole numbers)  <i>Aligns with VT GEs M6: 19, 20, 21, 22</i>	a) Create and interpret stem and leaf plots b) Organize data using a circle graph according to benchmark percentages  <i>Aligns with VT GEs M6: 23, 25</i>	a) Use the fundamental counting principle b) Apply experimental probability (design a fair game)  <i>Aligns with VT GE M6: 30</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M6: 7, 30</i>

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a) Proportional reasoning including percents and rates b) Represent numbers in scientific notation c) Multiply and divide integers d) Calculate square root of perfect square numbers and estimate square root of non-perfect square numbers e) Apply conventions of order of operations including grouping symbols and exponents f) Apply understanding of properties of numbers including prime factorization, inverses, identities, and distributive  <i>Aligns with VT GEs M7; 1, 2, 3, 4, 8</i>	a) Apply properties of similarity: scale factor's effect on linear, area, and angle measures b) Find and measure angles made by intersecting lines c) Find interior angle sum of polygons d) Apply triangle inequality theorem e) Solve problems involving reflections, translations, and rotations on a coordinate plane f) Find area of circles; surface area of rectangular prisms; and volume of rectangular prisms, triangular prisms, and cylinders  <i>Aligns with VT GEs M7: 9, 10, 13, 14</i>	a) Label units when finding surface area and volume  <i>Aligns with VT GE M7: 15</i>	a) Distinguish between linear and non-linear relationships from tables, graphs, and equations b) Find slope of a line from a table, graph, or equation ( $y=mx$ ) c) Evaluate expressions using order of operations consistent with this grade level d) Solve multi-step linear equations with variables on both sides of the equation ( $ax \pm b = cx \pm d$ , where $a$ , $b$ , $c$ , and $d$ are integers)  <i>Aligns with VT GEs M7: 19, 20, 21, 22</i>	a) Analyze measures of central tendency including outlier effect and variability b) Interpret and analyze scatter plots  <i>Aligns with VT GEs M7: 23, 24</i>	a) Use area models to represent and find probability b) Compare theoretical and experimental probability  <i>Aligns with VT GEs M7: 26, 27, 29</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M5: 7, 30</i>

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a) Demonstrate understanding of percent of change (percent increase and decrease) b) Compare common irrational numbers  <i>Aligns with VT GEs M8: 1, 2, 4</i>	a) Apply Pythagorean Theorem to find the length of a side of a right triangle b) Apply properties of similarity: scale factor's effect on volume and surface area c) Apply proportional reasoning to find side lengths in similar triangles d) Find volume and surface area of pyramids  <i>Aligns with VT GEs M8: 10, 13, 14</i>	a) Convert units across systems given conversion factors and formulas  <i>Aligns with VT GE M8: 15</i>	a) Generalize a non-linear relationship to find a specific case ( $y=x^2$ , solve for $y$ when $x=7$ ) b) Find and interpret slope and y-intercept from a table, graph, and equation ( $y=mx+b$ ) c) Evaluate expressions using order of operations consistent with this grade level d) Use the distributive property to compare two expressions e) Solve formulas for a variable requiring one transformation  <i>Aligns with VT GEs M8: 19, 20, 21, 22</i>	a) Interpret and create Box and Whisker plots including five number summaries b) Estimate the line of best fit on scatter plots to analyze the relationship between the variables  <i>Aligns with VT GEs M8: 23, 24</i>	a) Find permutations b) Calculate probability with or without equally likely outcomes  <i>Aligns with VT GEs M8: 26, 27</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs M5: 7, 30</i>

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<p>a) Graph, compare, find place value, round, and operate on whole numbers and decimals (operations with 2 digit numbers), fractions (mixed numbers only with common denominators, and only +, -)</p> <p>b) Understand meaning of absolute value and integers (ex: temperature, number line; no use of symbols or operations)</p> <p>c) Use proportions to solve algebraic and geometric problems (one variable with a calculator, incorporate similar figures)</p> <p>d) Use percents to solve problems including simple percents, (is/of=%/100, applications, use a calculator)</p> <p><i>Aligns with VT GEs MHS: 1, 4, 8</i></p>	<p>a) Use the Pythagorean theorem to solve problems (using Pythagorean triples only and a calculator)</p> <p>b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc)</p> <p>c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures (simple shapes)</p> <p>d) Use theorems and properties involving parallel and perpendicular lines (introduce concepts of parallel, perpendicular lines and vertical angles, corresponding, complementary, supplementary angles using numbers only)</p> <p>e) Use theorems and properties involving polygons and circles (identify triangles and types of quadrilaterals, circle: radius, diameter and introduce pi)</p> <p>f) Prove triangles congruent (concept of congruency with cutouts/matching)</p> <p>g) Prove triangles similar and solves for unknown sides and angles (included with ratio and proportion)</p> <p>h) Construct or accurately represent triangle relationships (classify and draw/construct isosceles, scalene, equilateral, acute, obtuse, right triangles)</p> <p>i) Find a midpoint (only on a number line)</p> <p><i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i></p>	<p><i>No power indicators at this level</i></p>	<p><b>Focus on a patterns approach to algebra</b></p> <p>a) Graph linear functions on a coordinate system</p> <p>b) Make connections among various representations of functions (linear, quadratic.): tables of values, equations, graphs, symbols, and verbal expressions (emphasize linear/first quadrant; using calculators for simple quadratics)</p> <p>c) Find slope, interpret as a rate of change, and use to solve problems (rise over run from graph on grid paper)</p> <p>d) Write equation of a line given slope and y-intercept (positive slope and positive y-intercept only from graphs)</p> <p>e) Write, simplify, and evaluate algebraic expressions (collect like terms, evaluate expressions with one variable positive terms)</p> <p>f) Use formulas and solve literal equations (solve one step equations mentally, for example, simple interest: <math>A = L \cdot W</math>)</p> <p>g) Solve one step linear equations with positive, whole numbers</p> <p>h) Solve and graph a system of linear equations and identifies number of solutions (solve system in quadrant one only by calculator)</p> <p><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i></p>	<p>a) Interpret information from and create tables, frequency distributions, histograms, and circle graphs</p> <p>b) Use and analyze measures of central tendency (mean, median, mode)</p> <p><i>Aligns with VT GEs MHS: 23, 24, 25</i></p>	<p>a) Find theoretical probability and probability of single events (Incorporate with fractions)</p> <p><i>Aligns with VT GE MHS: 26</i></p>	<p>a) Approach a problem correctly</p> <p>b) Provide a solution with evidence</p> <p>c) Communicate mathematically</p> <p><i>Aligns with VT GEs M1: 7, 30</i></p>

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a) Graph, compare and operate on real numbers (whole numbers, decimals, fractions, integers, percent, square roots [review whole numbers & decimals, emphasis on fractions and integers]). b) Find and use absolute value c) Use proportions to solve algebraic and geometric problems (one variable, some without a calculator) d) Use percents to solve problems including compound percent, change of base, and rate (some using estimation and mental math)  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Use the Pythagorean Theorem to solve problems (using calculator or easy whole numbers without a calculator, incorporate applications if time) b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc) c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures (irregular figures) d) Use theorems and properties involving parallel and perpendicular lines (introduce concepts of parallel, perpendicular lines and vertical angles, corresponding, complementary, supplementary angles using variables and more difficult numbers) e) Use theorems and properties involving polygons and circles (use of formulas for circle, area and circumference) f) Prove triangles congruent and solves for unknown sides and angles (congruency with measurement of sides and angles) g) Prove triangles similar and solves for unknown sides and angles (included with ratio and proportion) h) Construct or accurately represent triangle relationships (combining angle and sides.) i) Find a midpoint (ordered pairs)  <i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i>	a) Use unit analysis to determine units of measure  <i>Aligns with VT GE MHS: 15</i>	a) Graph linear functions, absolute values, quadratic function on a coordinate system (using tables and calculators for more complex problems) b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions (linear, quadratic, and absolute value using tables and calculators for more complex problems) c) Find slope, interpret as a rate of change, and use to solve problems (formula, graph, and $y = mx + b$ ) d) Write equation of a line given slope and y-intercepts from graph e) Write, simplify, and evaluate algebraic expressions (incorporate exponents, positive and negative terms, multiple variables and the distributive property) f) Use formulas and solve literal equations (use common formulas ex: compound interest, geometry formulas, etc) g) Use properties of exponents in algebraic expressions (multiplication, division and power to power properties of exponents) h) Add and subtract polynomials i) Solve linear, quadratic, and absolute value equations and linear inequalities (linear equations and one step linear inequalities by hand; quadratic and absolute value by calculator) j) Solve and graph a system of linear equations and identify number of solutions (solve graphically using tables; determine one, none, or many solutions using the graphing calculator)  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Create and interpret information from scatter plots b) Determine correlation between two variables from a scatter plot and determine linear regression lines c) Use and analyze measures of central tendency (generate data to meet particular conditions using mean, median, and mode) d) Choose an appropriate model (linear, absolute value, exponential, or quadratic) to fit data (incorporate in the Algebra section)  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	a) Find theoretical probability and probability of single events (incorporate with fractions)  <i>Aligns with VT GE MHS: 26</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Graph, compare, and operate on real numbers b) Find and use absolute value c) Use proportions to solve problems d) Use percents to solve problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Use the Pythagorean theorem to solve problems b) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures  <i>Aligns with VT GEs MHS: 9, 11, 14</i>	<i>No power indicators at this level</i>	a) Graph linear functions, absolute values, quadratic functions on a coordinate system b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions c) Find slope, interpret as a rate of change, and use to solve problems d) Write equation of a line given slope, intercepts, and points e) Write, simplify, and evaluate algebraic expressions f) Use formulas and solve literal equations g) Use properties of exponents in algebraic expressions h) Perform operations on polynomials including factoring i) Solve linear, quadratic, and absolute value equations and linear inequalities j) Solve and graph a system of linear equations and identify number of solutions  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Determine correlation between two variables from a scatter plot and determine linear regression lines b) Use and analyze measures of central tendency c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Graph, compare, and operate on real numbers b) Find and use absolute value c) Use proportions to solve algebraic and geometric problems d) Use percents to solve problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Use the Pythagorean theorem to solve problems b) Write algebraic expressions and solves problems involving perimeter, area, and volume of geometric figures  <i>Aligns with VT GEs MHS: 9, 11, 14</i>	<i>No power indicators at this level</i>	a) Graph linear functions, absolute values, quadratic functions on a coordinate system b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions c) Find slope, interprets as a rate of change, and uses to solve problems d) Write equation of a line given slope, intercepts, and points e) Write, simplify, and evaluate algebraic expressions f) Use formulas and solves literal equations g) Use properties of exponents in algebraic expressions h) Perform operations on polynomials including factoring i) Solve linear, quadratic, and absolute value equations and linear inequalities j) Solve and graph a system of linear equations and identify number of solutions  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Determine correlation between two variables from a scatter plot and determine linear regression lines b) Use and analyze measures of central tendency c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Use proportions to solve algebraic and geometric problems  <i>Aligns with VT GEs MHS: 4, 8</i>	a) Use the Pythagorean theorem to solve problems b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc) c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures d) Use theorems and properties involving parallel and perpendicular lines e) Use theorems and properties involving polygons and circles f) Prove triangles congruent and solve for unknown sides and angles g) Prove triangles similar and solve for unknown sides and angles using proportions h) Use right triangle trigonometry to solve for unknown sides and angle measurements i) Construct or accurately represent triangle relationships, properties of circles, and linear relationships j) Find a midpoint  <i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i>	a) Use unit analysis to determine units of measure  <i>Aligns with VT GE MHS: 15</i>	a) Find slope, interpret as a rate of change, and use to solve problems b) Write, simplify, and evaluate algebraic expressions c) Use formulas and solve literal equations d) Use properties of exponents in algebraic expressions e) Perform operations on polynomials including factoring f) Solve linear, quadratic, and absolute value equations and linear inequalities  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Interpret information from and create tables, frequency distributions, histograms, and circle graphs  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	a) Use combinations, arrangements and permutations to solve problems or determine theoretical probability and experimental probability  <i>Aligns with VT GE MHS: 26</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Graph, compare, and operate on real numbers b) Use proportions to solve algebraic and geometric problems c) Use percents to solve problems  <i>Aligns with VT GEs MHS: 4, 8</i>	a) Use the Pythagorean theorem to solve problems b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc) c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures d) Use theorems and properties involving parallel and perpendicular lines e) Use theorems and properties involving polygons and circles k) Prove triangles congruent and solve for unknown sides and angles f) Prove triangles similar and solve for unknown sides and angles using proportions g) Use right triangle trigonometry to solve for unknown sides and angle measurements h) Construct or accurately represent triangle relationships, properties of circles, and linear relationships i) Find a midpoint  <i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i>	a) Use unit analysis to determine units of measure  <i>Aligns with VT GE MHS: 15</i>	a) Find slope, interprets as a rate of change, and use to solve problems b) Write equation of a line given slope, intercepts, and points c) Write, simplify, and evaluate algebraic expressions d) Use formulas and solve literal equations e) Use properties of exponents in algebraic expressions  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Interpret information from and creates tables, frequency distributions, histograms, and circle graphs  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	a) Use combinations, arrangements and permutations to solve problems or determine theoretical probability and experimental probability  <i>Aligns with VT GE MHS: 26</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>



Math Power Standard #1 Numbers and Operations	Math Power Standard #2 Geometric Figures	Math Power Standard #3 Units of Measure	Math Power Standard #4 Patterns, Equations, and Inequalities	Math Power Standard #5 Data	Math Power Standard #6 Probability	Math Power Standard #7 Problem Solving
Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)	Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)	Students know and use units of measure. (Aligns with VT Standard 7.7)	Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with VT Standard 7.8)	Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)	Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)	Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10)
<p>a) Graph, compare, and operate on real numbers</p> <p>b) Find and use absolute value</p> <p>c) Use proportions to solve algebraic and geometric problems</p> <p>d) Use percents to solve problems</p> <p><i>Aligns with VT GEs MHS: 1, 4, 8</i></p>	<p>a) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc)</p> <p>b) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures</p> <p>c) Use theorems and properties involving parallel and perpendicular lines</p> <p>d) Find a midpoint</p> <p><i>Aligns with VT GEs MHS: 9, 11, 14</i></p>	<p>a) Uses unit analysis to determine units of measure</p> <p><i>Aligns with VT GE MHS: 15</i></p>	<p>a) Graph linear functions, absolute values, quadratic function on a coordinate system</p> <p>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions</p> <p>c) Find slope, interpret as a rate of change, and use to solve problems</p> <p>d) Write equation of a line given slope, intercepts, and points</p> <p>e) Write, simplify, and evaluate algebraic expressions</p> <p>f) Use formulas and solve literal equations</p> <p>g) Use properties of exponents in algebraic expressions</p> <p>h) Perform operations on polynomials including factoring</p> <p>i) Solve linear, quadratic, and absolute value equations and linear inequalities</p> <p>j) Solve and graph a system of linear equations</p> <p>k) Solve and graph a system of linear inequalities</p> <p><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i></p>	<p>a) Determine correlation between two variables from a scatter plot and determine linear regression lines</p> <p>b) Use and analyzes measures of central tendency</p> <p>c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data</p> <p><i>Aligns with VT GEs MHS: 23, 24, 25</i></p>	<p>a) Use combinations, arrangements and permutations to solve problems or determine theoretical probability and experimental probability</p> <p><i>Aligns with VT GE MHS: 26</i></p>	<p>a) Approach a problem correctly</p> <p>b) Provide a solution with evidence</p> <p>c) Communicate mathematically</p> <p><i>Aligns with VT GEs MHS: 7, 30</i></p>

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a) Graph, compare, and operate on real numbers b) Find and use absolute value c) Use proportions to solve algebraic and geometric problems d) Use percents to solve problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures b) Use theorems and properties involving parallel and perpendicular lines  <i>Aligns with VT GEs MHS: 9, 11, 14</i>	<i>No power indicators at this level</i>	a) Graph linear functions, absolute values, quadratic function on a coordinate system b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions c) Find slope, interpret as a rate of change, and use to solve problems d) Write equation of a line given slope, intercepts, and points e) Write, simplify, and evaluate algebraic expressions f) Use formulas and solve literal equations g) Use properties of exponents in algebraic expressions h) Perform operations on polynomials including factoring i) Solve linear, quadratic, and absolute value equations and linear inequalities j) Solve and graph a system of linear equations k) Solve and graph a system of linear inequalities  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Determine correlation between two variables from a scatter plot and determine linear regression lines b) Use and analyze measures of central tendency c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Graph, compare, and operate on real numbers b) Find and use absolute value c) Use proportions to solve algebraic and geometric problems d) Use percents to solve problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures b) Use theorems and properties involving parallel and perpendicular lines  <i>Aligns with Vermont GE's MHS: 9, 11, 14</i>	<i>No power indicators at this level</i>	a) Graph linear functions, absolute values, quadratic function on a coordinate system b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions c) Find slope, interpret as a rate of change, and use to solve problems d) Write equation of a line given slope, intercepts, and points e) Write, simplify, and evaluate algebraic expressions f) Use formulas and solve literal equations g) Use properties of exponents in algebraic expressions h) Perform operations on polynomials including factoring i) Solve linear, quadratic, and absolute value equations and linear inequalities j) Solve and graph a system of linear equations k) Solve and graph a system of linear inequalities  <i>Aligns with Vermont GE's MHS: 19, 20, 21, 22</i>	a) Determine correlation between two variables from a scatter plot and determine linear regression lines b) Use and analyze measures of central tendency c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>

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a) Graph, compare, and operate on real numbers b) Use proportions to solve algebraic and geometric problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	a) Use the Pythagorean Theorem to solve problems b) Write expressions and equation to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc) c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures d) Use theorems and properties involving parallel and perpendicular lines e) Use theorems and properties involving polygons and circles f) Use right triangle trigonometry to solve for unknown sides and angle measurements g) Construct or accurately represent triangle relationships, properties of circles, and linear relationships h) Find a midpoint  <i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i>	a) Use unit analysis to determine units of measure  <i>Aligns with Vermont GE MHS: 15</i>	a) Graph linear functions, absolute values, quadratic function on a coordinate system b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions c) Find slope, interpret as a rate of change, and use to solve problems d) Write equation of a line given slope, intercepts, and points e) Write, simplify, and evaluate algebraic expressions f) Use formulas and solve literal equations g) Use properties of exponents in algebraic expressions h) Perform operations on polynomials including factoring i) Solve linear, quadratic, and absolute value equations and linear Inequalities  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	<i>No power indicators at this level</i>	<i>No power indicators at this level</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>



<b>Math Power Standard #1 Numbers and Operations</b>  Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)	<b>Math Power Standard #2 Geometric Figures</b>  Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)	<b>Math Power Standard #3 Units of Measure</b>  Students know and use units of measure. (Aligns with VT Standard 7.7)	<b>Math Power Standard #4 Patterns, Equations, and Inequalities</b>  Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with VT Standard 7.8)	<b>Math Power Standard #5 Data</b>  Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)	<b>Math Power Standard #6 Probability</b>  Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)	<b>Math Power Standard #7 Problem Solving</b>  Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10)
<p><i>No power indicators at this level</i></p>	<p>a) Use the Pythagorean theorem to solve problems b) Use right triangle trigonometry to solve for unknown sides and angle measurements</p> <p><i>Aligns with VT GEs MHS: 11, 13</i></p>	<p>a) Use unit analysis to determine units of measure</p> <p><i>Aligns with VT GE MHS: 15</i></p>	<p>a) Find slope, interprets as a rate of change, and uses to solve problems b) Write equation of a line given slope, intercepts, and points c) Use formulas and solve literal equations</p> <p><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i></p>	<p><i>No power indicators at this level</i></p>	<p><i>No power indicators at this level</i></p>	<p>a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically</p> <p><i>Aligns with VT GEs MHS: 7, 30</i></p>

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a) Graph, compare, and operate on real numbers b) Use proportions to solve algebraic and geometric problems  <i>Aligns with VT GEs MHS: 1, 4, 8</i>	c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures d) Use theorems and properties involving parallel and perpendicular lines e) Use right triangle trigonometry to solve for unknown sides and angle measurements  <i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i>	<i>No power indicators at this level</i>	a) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions b) Write, simplify, and evaluate algebraic expressions c) Use formulas and solves literal equations d) Use properties of exponents in algebraic expressions e) Perform operations on polynomials including factoring  <i>Aligns with VT GEs MHS: 19, 20, 21, 22</i>	a) Interpret information from and create tables, frequency distributions, histograms, and circle graphs b) Determine correlation between two variables from a scatter plot and determine linear regression lines c) Use and analyze measures of central tendency d) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data  <i>Aligns with VT GEs MHS: 23, 24, 25</i>	a) Uses combinations, arrangements and permutations to solve problems or determine theoretical probability and experimental probability  <i>Aligns with VT GE MHS: 26</i>	a) Approach a problem correctly b) Provide a solution with evidence c) Communicate mathematically  <i>Aligns with VT GEs MHS: 7, 30</i>