


# CCSU Guaranteed, Viable Curriculum

## K-12 Power Standards and Power Indicators

 Guaranteed, Viable Curriculum  
Power Standards and Power Indicators

# MATH: Kindergarten

| Math Power Standard #1<br>Numbers and Operations   | Math Power Standard #2<br>Geometric Figures  | Math Power Standard #3<br>Units of Measure   | Math Power Standard #4<br>Patterns, Equations, and Inequalities  | Math Power Standard #5<br>Data  | Math Power Standard #6<br>Probability   | Math Power Standard #7<br>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<br>b) Name numbers to 50<br>c) Count a set of objects to 50<br>d) Use strategies to add and subtract<br>e) Count back from 15 to 0<br>f) Recognize and name coins<br><br><i>Aligns with VT GEs MK: 1, 2, 3, 4, 5</i> | a) Recognize and name triangles, rectangles, circles, squares<br>b) Sort and classify objects by one attribute<br><br><i>Aligns with VT GE MK: 9</i> | a) Express passage of time to sequence events<br>b) Identify clock and calendar as tools to measure time<br><br><i>Aligns with VT GEs MK: 15, 16, 18</i> | a) Extend a variety of repeating patterns with shapes, sounds, letters, numbers, etc...<br>b) Solve equations for numbers less than 10 using models, manipulatives, or verbal explanations<br><br><i>Aligns with VT GEs MK: 19, 22</i> | a) Interpret and analyze data from tally charts, bar graphs, and picture graphs<br><br><i>Aligns with VT GEs MK: 23, 24, 25</i> | <i>No power indicators at this level</i>  | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MK: 7, 30</i> |

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

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

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| a) Identify and name the value of each digit in a four-digit number<br>b) Read and write numbers up to 9,999<br>c) Estimate and compute addition and subtraction problems involving regrouping<br>d) Solve multiplication problems using the area model, repeated addition, and equal groups<br>e) Identify sixths and eighths of a whole and set<br>f) Compare fractions (halves, thirds, fourths)<br>g) Find equivalent fractions for halves, thirds, and fourths<br>h) Use decimals in the context of money<br><br><i>Aligns with VT GEs M3:1, 2, 3, 4</i> | a) Determine area of a rectangle on a grid<br>b) Determine perimeter of a polygon<br>c) Use properties of geometric figures to distinguish among them<br><br><i>Aligns with VT GEs M3: 9, 14</i> | a) Convert linear measurements within the US system<br>b) Convert passages of time (hours-days, days-weeks, days-years)<br>c) Measure length to the quarter-inch<br><br><i>Aligns with VT GE M3: 15</i> | a) Find missing elements in an open number sentence<br>b) Determine the rule for a constant rate of change (in/out boxes)<br><br><i>Aligns with VT GEs M3: 19, 20, 22</i> | a) Generate questions about a data set<br>b) Identify the mode of a data set<br>c) Create and interpret appropriate representations for a data set (bar graphs, line plots, tally charts, tables)<br><br><i>Aligns with VT GEs M3: 23, 24, 25</i> | a) Identify the probability of an event as more likely or less likely<br><br><i>Aligns with VT GE M3: 27</i> | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs M3: 7, 30</i> |



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

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



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| <ul style="list-style-type: none"> <li>a) Perform multiple operations on fractions</li> <li>b) Operate on decimals</li> <li>c) Understand percent of a whole (0-100%)</li> <li>d) Compare two numbers using rates and ratios</li> <li>e) Add and subtract integers</li> <li>f) Compare and order rational numbers</li> <li>g) Demonstrate understanding of powers of numbers</li> <li>h) Apply properties of numbers including greatest common factor, least common multiple, commutative and associative</li> <li>i) Apply conventions of order of operations including grouping symbols</li> </ul> <p><i>Aligns with VT GEs M6: 1, 2, 3</i></p> | <ul style="list-style-type: none"> <li>a) Demonstrate congruency using angle measures and side lengths</li> <li>b) Apply properties of similarity: scale factor's effect on linear measures</li> <li>c) Find area of quadrilaterals and triangles using formulas</li> <li>d) Find volume of rectangular prisms</li> <li>e) Use circle measures (radius, diameter, and circumference)</li> </ul> <p><i>Aligns with VT GEs M6: 9, 12, 14</i></p> | <ul style="list-style-type: none"> <li>a) Label units when finding perimeter, area, and volume</li> <li>b) Convert units within systems</li> </ul> <p><i>Aligns with VT GE M6: 15</i></p> | <ul style="list-style-type: none"> <li>a) Generalize linear relationships in words or symbols</li> <li>b) Identify a constant rate of change for tables and graphs</li> <li>c) Evaluate expressions using order of operations consistent with this grade level</li> <li>d) Solve two step equations (<math>ax \pm b = c</math>, where a, b, and c are whole numbers)</li> </ul> <p><i>Aligns with VT GEs M6: 19, 20, 21, 22</i></p> | <ul style="list-style-type: none"> <li>a) Create and interpret stem and leaf plots</li> <li>b) Organize data using a circle graph according to benchmark percentages</li> </ul> <p><i>Aligns with VT GEs M6: 23, 25</i></p> | <ul style="list-style-type: none"> <li>a) Use the fundamental counting principle</li> <li>b) Apply experimental probability (design a fair game)</li> </ul> <p><i>Aligns with VT GE M6: 30</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 M6: 7, 30</i></p> |

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

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

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| 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, 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> |



| Math Power Standard #1<br>Numbers and Operations  | Math Power Standard #2<br>Geometric Figures   | Math Power Standard #3<br>Units of Measure  | Math Power Standard #4<br>Patterns, Equations, and Inequalities  | Math Power Standard #5<br>Data  | Math Power Standard #6<br>Probability  | Math Power Standard #7<br>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 (whole numbers, decimals, fractions, integers, percent, square roots [review whole numbers &amp; decimals, emphasis on fractions and integers]).</p> <p>b) Find and use absolute value</p> <p>c) Use proportions to solve algebraic and geometric problems (one variable, some without a calculator)</p> <p>d) Use percents to solve problems including compound percent, change of base, and rate (some using estimation and mental math)</p> <p><i>Aligns with VT GEs MHS: 1, 4, 8</i></p> | <p>a) Use the Pythagorean Theorem to solve problems (using calculator or easy whole numbers without a calculator, incorporate applications if time)</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 (irregular figures)</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 variables and more difficult numbers)</p> <p>e) Use theorems and properties involving polygons and circles (use of formulas for circle, area and circumference)</p> <p>f) Prove triangles congruent and solves for unknown sides and angles (congruency with measurement of sides and angles)</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 (combining angle and sides.)</p> <p>i) Find a midpoint (ordered pairs)</p> <p><i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</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) Graph linear functions, absolute values, quadratic function on a coordinate system (using tables and calculators for more complex problems)</p> <p>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)</p> <p>c) Find slope, interpret as a rate of change, and use to solve problems (formula, graph, and <math>y = mx + b</math>)</p> <p>d) Write equation of a line given slope and y-intercepts from graph</p> <p>e) Write, simplify, and evaluate algebraic expressions (incorporate exponents, positive and negative terms, multiple variables and the distributive property)</p> <p>f) Use formulas and solve literal equations (use common formulas ex: compound interest, geometry formulas, etc)</p> <p>g) Use properties of exponents in algebraic expressions (multiplication, division and power to power properties of exponents)</p> <p>h) Add and subtract polynomials</p> <p>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)</p> <p>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)</p> <p><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i></p> | <p>a) Create and interpret information from scatter plots</p> <p>b) Determine correlation between two variables from a scatter plot and determine linear regression lines</p> <p>c) Use and analyze measures of central tendency (generate data to meet particular conditions using mean, median, and mode)</p> <p>d) Choose an appropriate model (linear, absolute value, exponential, or quadratic) to fit data (incorporate in the Algebra section)</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 MHS: 7, 30</i></p> |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)                                     | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)  | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9) | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|---|---|--|---|--|---|
| a) Graph, compare, and operate on real numbers<br>b) Find and use absolute value<br>c) Use proportions to solve problems<br>d) Use percents to solve problems<br><br><i>Aligns with VT GEs MHS: 1, 4, 8</i> | a) Use the Pythagorean theorem to solve problems<br>b) Write algebraic expressions and solves problems involving perimeter, area, and volume of geometric figures<br><br><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<br>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions<br>c) Find slope, interprets as a rate of change, and uses to solve problems<br>d) Write equation of a line given slope, intercepts, and points<br>e) Write, simplify, and evaluate algebraic expressions<br>f) Use formulas and solves literal equations<br>g) Use properties of exponents in algebraic expressions<br>h) Perform operations on polynomials including factoring<br>i) Solve linear, quadratic, and absolute value equations and linear inequalities<br>j) Solve and graph a system of linear equations and identify number of solutions<br><br><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<br>b) Use and analyze measures of central tendency<br>c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data<br><br><i>Aligns with VT GEs MHS: 23, 24, 25</i> | <i>No power indicators at this level</i>   | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |

| Math Power Standard #1<br>Numbers and Operations   | Math Power Standard #2<br>Geometric Figures  | Math Power Standard #3<br>Units of Measure                            | Math Power Standard #4<br>Patterns, Equations, and Inequalities   | Math Power Standard #5<br>Data   | Math Power Standard #6<br>Probability   | Math Power Standard #7<br>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) Use the Pythagorean theorem to solve problems</p> <p>b) Write algebraic expressions and solves problems involving perimeter, area, and volume of geometric figures</p> <p><i>Aligns with VT GEs MHS: 9, 11, 14</i></p> | <p><i>No power indicators at this level</i></p>                       | <p>a) Graph linear functions, absolute values, quadratic functions 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, interprets as a rate of change, and uses 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 solves 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 and identify number of solutions</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 analyze 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><i>No power indicators at this level</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> |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6) | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)                       | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)                                 | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|---|---|--|--|--|---|
| a) Use proportions to solve algebraic and geometric problems<br><br><i>Aligns with VT GEs MHS: 4, 8</i>   | a) Use the Pythagorean theorem to solve problems<br>b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc)<br>c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures<br>d) Use theorems and properties involving parallel and perpendicular lines<br>e) Use theorems and properties involving polygons and circles<br>f) Prove triangles congruent and solve for unknown sides and angles<br>g) Prove triangles similar and solve for unknown sides and angles using proportions<br>h) Use right triangle trigonometry to solve for unknown sides and angle measurements<br>i) Construct or accurately represent triangle relationships, properties of circles, and linear relationships<br>j) Find a midpoint<br><br><i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i> | a) Use unit analysis to determine units of measure<br><br><i>Aligns with VT GE MHS: 15</i>                                      | a) Find slope, interpret as a rate of change, and use to solve problems<br>b) Write, simplify, and evaluate algebraic expressions<br>c) Use formulas and solve literal equations<br>d) Use properties of exponents in algebraic expressions<br>e) Perform operations on polynomials including factoring<br>f) Solve linear, quadratic, and absolute value equations and linear inequalities<br><br><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i> | a) Interpret information from and create tables, frequency distributions, histograms, and circle graphs<br><br><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<br><br><i>Aligns with VT GE MHS: 26</i> | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)                        | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)                        | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)                                 | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|--|---|---|--|---|--|---|
| a) Graph, compare, and operate on real numbers<br>b) Use proportions to solve algebraic and geometric problems<br>c) Use percents to solve problems<br><br><i>Aligns with VT GEs MHS: 4, 8</i> | a) Use the Pythagorean theorem to solve problems<br>b) Write expressions and equations to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc)<br>c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures<br>d) Use theorems and properties involving parallel and perpendicular lines<br>e) Use theorems and properties involving polygons and circles<br>k) Prove triangles congruent and solve for unknown sides and angles<br>f) Prove triangles similar and solve for unknown sides and angles using proportions<br>g) Use right triangle trigonometry to solve for unknown sides and angle measurements<br>h) Construct or accurately represent triangle relationships, properties of circles, and linear relationships<br>i) Find a midpoint<br><br><i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i> | a) Use unit analysis to determine units of measure<br><br><i>Aligns with VT GE MHS: 15</i>                                      | a) Find slope, interprets as a rate of change, and use to solve problems<br>b) Write equation of a line given slope, intercepts, and points<br>c) Write, simplify, and evaluate algebraic expressions<br>d) Use formulas and solve literal equations<br>e) Use properties of exponents in algebraic expressions<br><br><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i> | a) Interpret information from and creates tables, frequency distributions, histograms, and circle graphs<br><br><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<br><br><i>Aligns with VT GE MHS: 26</i> | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |



| Math Power Standard #1<br>Numbers and Operations  | Math Power Standard #2<br>Geometric Figures  | Math Power Standard #3<br>Units of Measure   | Math Power Standard #4<br>Patterns, Equations, and Inequalities  | Math Power Standard #5<br>Data  | Math Power Standard #6<br>Probability   | Math Power Standard #7<br>Problem Solving  |
|---|--|--|--|---|---|--|
| <p>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)</p>  | <p>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)</p>  | <p>Students know and use units of measure. (Aligns with VT Standard 7.7)</p>                       | <p>Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with VT Standard 7.8)</p>   | <p>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)</p>   | <p>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)</p>  | <p>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10)</p>                                      |
| <p>a) Graph, compare, and operate on real numbers<br/>b) Find and use absolute value<br/>c) Use proportions to solve algebraic and geometric problems<br/>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)<br/>b) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures<br/>c) Use theorems and properties involving parallel and perpendicular lines<br/>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<br/>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions<br/>c) Find slope, interpret as a rate of change, and use to solve problems<br/>d) Write equation of a line given slope, intercepts, and points<br/>e) Write, simplify, and evaluate algebraic expressions<br/>f) Use formulas and solve literal equations<br/>g) Use properties of exponents in algebraic expressions<br/>h) Perform operations on polynomials including factoring<br/>i) Solve linear, quadratic, and absolute value equations and linear inequalities<br/>j) Solve and graph a system of linear equations<br/>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<br/>b) Use and analyzes measures of central tendency<br/>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<br/>b) Provide a solution with evidence<br/>c) Communicate mathematically</p> <p><i>Aligns with VT GEs MHS: 7, 30</i></p> |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)   | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)  | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9) | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|---|---|---|---|--|---|
| a) Graph, compare, and operate on real numbers<br>b) Find and use absolute value<br>c) Use proportions to solve algebraic and geometric problems<br>d) Use percents to solve problems<br><br><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<br>b) Use theorems and properties involving parallel and perpendicular lines<br><br><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<br>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions<br>c) Find slope, interpret as a rate of change, and use to solve problems<br>d) Write equation of a line given slope, intercepts, and points<br>e) Write, simplify, and evaluate algebraic expressions<br>f) Use formulas and solve literal equations<br>g) Use properties of exponents in algebraic expressions<br>h) Perform operations on polynomials including factoring<br>i) Solve linear, quadratic, and absolute value equations and linear inequalities<br>j) Solve and graph a system of linear equations<br>k) Solve and graph a system of linear inequalities<br><br><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<br>b) Use and analyze measures of central tendency<br>c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data<br><br><i>Aligns with VT GEs MHS: 23, 24, 25</i> | <i>No power indicators at this level</i>   | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6)   | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)  | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9) | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|---|---|---|---|--|---|
| a) Graph, compare, and operate on real numbers<br>b) Find and use absolute value<br>c) Use proportions to solve algebraic and geometric problems<br>d) Use percents to solve problems<br><br><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<br>b) Use theorems and properties involving parallel and perpendicular lines<br><br><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<br>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions<br>c) Find slope, interpret as a rate of change, and use to solve problems<br>d) Write equation of a line given slope, intercepts, and points<br>e) Write, simplify, and evaluate algebraic expressions<br>f) Use formulas and solve literal equations<br>g) Use properties of exponents in algebraic expressions<br>h) Perform operations on polynomials including factoring<br>i) Solve linear, quadratic, and absolute value equations and linear inequalities<br>j) Solve and graph a system of linear equations<br>k) Solve and graph a system of linear inequalities<br><br><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<br>b) Use and analyze measures of central tendency<br>c) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data<br><br><i>Aligns with VT GEs MHS: 23, 24, 25</i> | <i>No power indicators at this level</i>   | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6) | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)  | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9) | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9) | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|--|---|--|--|--|---|
| a) Graph, compare, and operate on real numbers<br>b) Use proportions to solve algebraic and geometric problems<br><br><i>Aligns with VT GEs MHS: 1, 4, 8</i>            | a) Use the Pythagorean Theorem to solve problems<br>b) Write expressions and equation to solve problems involving geometric concepts (complementary, supplementary, triangle sum, etc)<br>c) Write algebraic expressions and solve problems involving perimeter, area, and volume of geometric figures<br>d) Use theorems and properties involving parallel and perpendicular lines<br>e) Use theorems and properties involving polygons and circles<br>f) Use right triangle trigonometry to solve for unknown sides and angle measurements<br>g) Construct or accurately represent triangle relationships, properties of circles, and linear relationships<br>h) Find a midpoint<br><br><i>Aligns with VT GEs MHS: 9, 11, 13, 14, 17</i> | a) Use unit analysis to determine units of measure<br><br><i>Aligns with Vermont GE MHS: 15</i>                                 | a) Graph linear functions, absolute values, quadratic function on a coordinate system<br>b) Make connections among various representations of functions (linear, quadratic, absolute value, etc.): tables of values, equations, graphs, symbols, and verbal expressions<br>c) Find slope, interpret as a rate of change, and use to solve problems<br>d) Write equation of a line given slope, intercepts, and points<br>e) Write, simplify, and evaluate algebraic expressions<br>f) Use formulas and solve literal equations<br>g) Use properties of exponents in algebraic expressions<br>h) Perform operations on polynomials including factoring<br>i) Solve linear, quadratic, and absolute value equations and linear Inequalities<br><br><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<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |



| Math Power Standard #1<br>Numbers and Operations  | Math Power Standard #2<br>Geometric Figures   | Math Power Standard #3<br>Units of Measure   | Math Power Standard #4<br>Patterns, Equations, and Inequalities  | Math Power Standard #5<br>Data   | Math Power Standard #6<br>Probability   | Math Power Standard #7<br>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)                                    |
| <i>No power indicators at this level</i>  | a) Use the Pythagorean theorem to solve problems<br>b) Use right triangle trigonometry to solve for unknown sides and angle measurements<br><br><i>Aligns with VT GEs MHS: 11, 13</i> | a) Use unit analysis to determine units of measure<br><br><i>Aligns with VT GE MHS: 15</i> | a) Find slope, interprets as a rate of change, and uses to solve problems<br>b) Write equation of a line given slope, intercepts, and points<br>c) Use formulas and solve literal equations<br><br><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<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i> |

| <b>Math Power Standard #1<br/>Numbers and Operations</b><br><br>Students understand value and apply properties and operations of numbers. (Aligns with VT Standard 7.6) | <b>Math Power Standard #2<br/>Geometric Figures</b><br><br>Students know and apply the attributes of geometric figures. (Aligns with VT Standard 7.7)   | <b>Math Power Standard #3<br/>Units of Measure</b><br><br>Students know and use units of measure. (Aligns with VT Standard 7.7) | <b>Math Power Standard #4<br/>Patterns, Equations, and Inequalities</b><br><br>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<br/>Data</b><br><br>Students represent, interpret, and predict using data. (Aligns with VT Standard 7.9)   | <b>Math Power Standard #6<br/>Probability</b><br><br>Students find probability theoretically and experimentally. (Aligns with VT Standard 7.9)                                  | <b>Math Power Standard #7<br/>Problem Solving</b><br><br>Students use a variety of approaches to solve problems and communicate solutions. (Aligns with VT Standard 7.10) |
|---|---|---|--|--|---|---|
| a) Graph, compare, and operate on real numbers<br>b) Use proportions to solve algebraic and geometric problems<br><br><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<br>d) Use theorems and properties involving parallel and perpendicular lines<br>e) Use right triangle trigonometry to solve for unknown sides and angle measurements<br><br><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<br>b) Write, simplify, and evaluate algebraic expressions<br>c) Use formulas and solves literal equations<br>d) Use properties of exponents in algebraic expressions<br>e) Perform operations on polynomials including factoring<br><br><i>Aligns with VT GEs MHS: 19, 20, 21, 22</i> | a) Interpret information from and create tables, frequency distributions, histograms, and circle graphs<br>b) Determine correlation between two variables from a scatter plot and determine linear regression lines<br>c) Use and analyze measures of central tendency<br>d) Choose an appropriate model (linear, absolute value, exponential or quadratic) to fit data<br><br><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<br><br><i>Aligns with VT GE MHS: 26</i> | a) Approach a problem correctly<br>b) Provide a solution with evidence<br>c) Communicate mathematically<br><br><i>Aligns with VT GEs MHS: 7, 30</i>                       |