**Virginia Standards of Learning Assessment**

**Grade 6 Mathematics Performance Level Descriptors**

| **Fail/Below Basic** | **Fail/Basic** | **Pass/Proficient** | **Pass/Advanced** |
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| A student performing at this level should be able to:  *Reporting Category 1: Number and Number Sense*   * define ratio as the comparison of two quantities * use a pictorial model to represent numbers in fraction, decimal, or percent form * identify positive and negative numbers on a number line * identify powers of ten by recognizing patterns * identify the base and exponent of an exponential expression * use inequality symbols to represent the relationship between integers modeled on a number line   *Reporting Category 2: Computation and Estimation*   * add, subtract, multiply, and divide basic fractions * define the order of operations process used for simplifying numerical expressions * use manipulatives to add integers   *Reporting Category 3: Measurement and Geometry*   * define 3.14 and 22/7 as approximations for pi * identify the origin and x- and y-axis on the coordinate plane * find the perimeter of a labeled figure * identify polygons as congruent or not congruent   *Reporting Category 4: Probability, Statistics, Patterns, Functions, and Algebra*   * read data represented in bar graphs, line graphs, and circle graphs * define mean as an average * find a missing value in a ratio table when given the unit rate * describe an algebraic expression | A student performing at this level should be able to:  *Reporting Category 1: Number and Number Sense* can recognize ratios using fractions, colons, or the word *to*   * represent equivalencies between decimals, fractions, and percents * represent integers on a number line * identify the absolute value of whole numbers * represent an exponential as repeated multiplication * use manipulatives to identify perfect squares   *Reporting Category 2: Computation and Estimation*   * add, subtract, multiply, and divide proper fractions * apply the order of operations to simplify a whole number expression * use manipulatives to add and subtract integers   *Reporting Category 3: Measurement and Geometry*   * identify relationships between parts of a circle and define pi as a ratio * apply formulas to problems involving area and perimeter of rectangles and triangles * identify the coordinates of a point and the four quadrants * verify the congruence of polygons and angles * identify a line of symmetry   *Reporting Category 4: Probability, Statistics, Patterns, Functions, and Algebra*   * interpret data represented in a circle graph * describe the three measures of center * determine whether a proportional relationship exists between two quantities * solve one-step equations with models * describe the solution set to an inequality | A student performing at this level should be able to:  *Reporting Category 1: Number and Number Sense*   * compare quantities with ratio notation * compare and order integers and positive rational numbers * describe equivalencies among decimals, fractions, and percents using various representations and symbols * describe absolute value of integers * represent patterns with exponents and perfect squares   *Reporting Category 2: Computation and Estimation*   * model the product and quotient of fractions and mixed numbers * multiply/divide mixed numbers * solve multistep practical problems involving fractions, mixed numbers, and decimals * simplify numerical expressions involving integers   *Reporting Category 3: Measurement and Geometry*   * solve practical problems involving the area and perimeter of rectangles and triangles * solve practical problems involving the circumference and area of circles * use coordinates to graph points and identify the corresponding quadrant and axis * identify regular polygons and lines of symmetry * determine congruence of segments, angles, and polygons   *Reporting Category 4: Probability, Statistics, Patterns, Functions, and Algebra*   * create circle graphs and make predictions * represent the mean and the effect of adding, removing, or changing one value in a data set * represent a proportional relationship from a practical situation, table, and graph * make connections between two proportional relationships * solve one-step linear equations * solve and graph one-step inequalities | A student performing at this level should be able to:  *Reporting Category 1: Number and Number Sense*   * apply ratios to practical problems * compare and order positive rational numbers, including percents written in fraction and decimal form * apply integers and absolute value to a practical context * model perfect squares * identify two or more ways to represent a given number using exponents   *Reporting Category 2: Computation and Estimation*   * solve multistep practical problems involving fractions, mixed numbers, decimals, and integers   *Reporting Category 3: Measurement and Geometry*   * describe and explain the derivation of pi * solve multistep practical problems involving the area and perimeter of rectangles and triangles * solve multistep practical problems involving circumference and area of circles * describe relative locations of points in a coordinate plane * describe corresponding parts of a figure that is congruent to a given figure   *Reporting Category 4: Probability, Statistics, Patterns, Functions, and Algebra*   * create circle graphs to represent practical situations * solve practical problems using circle graphs, and relate circle graphs to other types of graphs * solve practical problems involving changes in data and measures of center * apply proportional relationships to solve practical problems * solve practical problems using linear equations * represent and graph practical problems using inequalities |