

**Virginia Standards of Learning Assessment
Grade 5 Mathematics Performance Level Descriptors**

Fail/Below Basic	Fail/Basic	Pass/Proficient	Pass/Advanced
<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Round whole numbers. • Recognize, name, compare, and order fractions with like denominators. • Recognize, name, and compare decimals. • Identify prime, composite, odd, and even numbers using manipulatives. • Solve single-step equations involving basic addition, subtraction, and multiplication or division of whole numbers using manipulatives. • Define the order of operations, distributive property, variables, and probability. • Identify squares, rectangles, and triangles, and use labeled diagrams to calculate perimeter and area of each figure. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Round decimal numbers to the nearest tenth using a number line. • Compare and order a set of decimals or fractions, and use manipulatives to represent fractions and decimals in equivalent form. • Use manipulatives to identify and describe prime, composite, even, and odd numbers. • Identify the first step in simplifying expressions with more than one operation. • Solve and model single-step equations involving basic addition, subtraction, and multiplication or division of whole numbers, and model the distributive property. • Calculate perimeter and area of squares, rectangles, and triangles without diagrams. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Round decimal numbers to the nearest whole number, tenth, and hundredth. • Recognize, name, compare, order, and represent fractions (with denominators up to twelve) and decimals, and identify fraction/ decimal equivalence. • Identify and describe the characteristics of odd, even, prime, and composite numbers less than or equal to 100. • Evaluate single and multistep expressions, and solve practical problems involving addition, subtraction, multiplication, and division of whole numbers, decimals through the thousandths, fractions, and mixed numbers expressed in simplest form. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Use understanding of rounding to estimate values of numbers, and to represent repeating decimals in fraction form. • Represent equivalent relationships between decimals and fractions, and compare representations using mathematical symbols. • Apply rules of divisibility to identify prime and composite numbers. • Determine if the sum, difference, product, or quotient of a numerical expression is odd or even. • Create and solve single and multistep practical problems and word problems with whole numbers, decimals, fractions, and mixed numbers. • Use estimation to determine the reasonableness of solutions.

Fail/Below Basic	Fail/Basic	Pass/Proficient	Pass/Advanced
<ul style="list-style-type: none"> • Identify the diameter, radius, and circumference of a circle. • Determine elapsed time to the nearest hour within a 12-hour period limited to a.m. or p.m. only. • Identify right and straight angles. • Display data by constructing charts and tables, and describe mean as fair share. • Recognize simple patterns given shapes or pictures. 	<ul style="list-style-type: none"> • Classify basic shapes that have been combined or subdivided. • Identify and describe the diameter, radius, chord, and circumference of a circle. • Determine elapsed time to the nearest half and quarter of an hour within a 12 hour period, limited to a.m. or p.m. only. • Determine the measure of right, acute, straight, and obtuse angles. • Understand the algorithm used to determine the outcomes of an event that are equally likely to occur. • Select and organize the appropriate display of data and use it to find the mean, median, mode, and range. • Identify basic numerical and geometric patterns. 	<ul style="list-style-type: none"> • Apply the definition of a variable to represent and create mathematical relationships using open sentences, and use addition and subtraction to model and create one-step linear equations in one variable. • Simplify whole number numerical expressions using the order of operations, and recognize the application of the distributive property. • Identify equivalent measurements within the metric system. • Determine the appropriate usage of the area, perimeter, and volume of figures, estimating and determining each measure using U.S. Customary and metric units. • Identify and describe the relationship between the parts of a circle. • Determine elapsed time to the nearest minute within a 24 hour period. 	<ul style="list-style-type: none"> • Describe the order in which operations were applied to an expression involving more than one operation, identifying the application of the distributive property. • Find the area and perimeter of plane figures and the volume of rectangular solids, and investigate and describe the results of combining and subdividing plane figures for practical problems using U.S. Customary and metric units. • Use the relationships between the parts of a circle to determine unknown measures. • Solve elapsed time practical problems, including start time, end time, and elapsed time over a 24 hour period. • Recognize angles as additive to find unknown measures, and classify triangles by side and angle measures. • Construct a sample space using a tree diagram, list, or chart to predict and determine possible outcomes of a single event.

Fail/Below Basic	Fail/Basic	Pass/Proficient	Pass/Advanced
		<ul style="list-style-type: none"> • Classify and determine measures for right, acute, straight, and obtuse angles, and classify triangles as right, acute, obtuse, equilateral, scalene, and isosceles. • Develop definitions for squares, rectangles, triangles, parallelograms, rhombi, and trapezoids, and describe the polygons resulting from combining or subdividing these figures. • Use a data set to construct charts, tables, stem-and-leaf plots, and line graphs, and to calculate and interpret the mean as fair share, median, mode, and range as a measure of variation. • Construct a sample space using a tree diagram, list, or chart to predict and determine the probability of a single event. • Identify and extend numerical and geometric patterns. 	<ul style="list-style-type: none"> • Describe the impact on measures of center and variation when a single value of a data set is added, removed, or changed, and draw conclusions from data represented in stem-and-leaf plots and line graphs. • Use words, tables, and symbols to express the relationship found in a pattern.