

**Virginia Standards of Learning Assessment
Grade 4 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"> • Identify whole numbers, fractions, and decimals using concrete materials, and name comparison symbols $<$, $>$, and $=$. • Add and subtract whole numbers and decimals that have been aligned and require no regrouping, and add fractions with like denominators that require no simplification. • Recognize units of measure and time, and identify time on a digital and an analog clock. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Identify place and value of digits in whole numbers and decimals; compare whole numbers, decimals, and fractions using models; and identify the fraction bar as a symbol for division. • Recall basic facts to perform whole number operations; add and subtract decimals that have been aligned; determine factors and multiples of a single number; and add and subtract fractions with like denominators. • Measure objects for length, volume, and mass using models, and determine elapsed time using analog and digital clocks. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Use the place value structure (ten-to-one relationship) to read, write, round, compare, and order whole numbers, decimals, fractions and mixed numbers without models; represent equivalent fractions and fraction/ decimal equivalence using models; and identify the relationship between fractions and division statements in various formats. 	<p>A student performing at this level should be able to:</p> <ul style="list-style-type: none"> • Use place value structure (ten-to-one relationship) to solve problems involving rounding and comparison of whole numbers, decimals, fractions, and mixed numbers; and represent fraction/ decimal equivalence and the relationship between fractions and division statements, and use these representations to solve problems. • Solve single and multistep problems involving whole numbers, decimals, and fractions and draw conclusions; and find common multiples and factors of a set of numbers, including LCM and GCF.

Fail/Below Basic	Fail/Basic	Pass/Proficient	Pass/Advanced
<ul style="list-style-type: none"> • Identify isolated pictorial representations of points, lines, line segments, rays, angles, and common polygons, and identify congruent figures using concrete materials. • Identify repeating patterns using models or concrete materials, and identify a bar graph and a line graph. • Identify events that are "certain" and "impossible" to occur. 	<ul style="list-style-type: none"> • Identify pictorial representations of geometric figures, including lines that illustrate parallelism, perpendicularity, and intersection, and recognize congruent figures resulting from transformations using concrete materials. • Identify and extend repeating patterns using models; construct and display data in bar graphs and line graphs; and match data to graphs. • Identify the likelihood of a simple event using probability terms and match pictorial representations of a probability event to its fraction, recognizing that "0" equates with impossible and "1" with certain. 	<ul style="list-style-type: none"> • Estimate and solve single-step and multistep problems using addition, subtraction, multiplication and division of whole numbers and addition and subtraction of decimals and fractions, and find common multiples and factors of two numbers, including least common multiple (LCM) and greatest common factor (GCF). • Estimate measures for objects; measure objects, and identify equivalent measures using appropriate units for weight/mass, length, and liquid volume; and determine elapsed time in hours and minutes. • Describe geometric figures and their properties, including polygons, from representations, and identify and recognize congruent images resulting from transformations. 	<ul style="list-style-type: none"> • Demonstrate understanding of the measure of weight/mass, length, liquid volume, and elapsed time without pictorial representations. • Identify, describe, and create representations of geometric figures, including polygons, and apply geometric transformations to a variety of figures. • Construct, interpret, and analyze information to extend patterns; design equivalent mathematical relationships; and organize, analyze, and interpret data in graphs, and draw conclusions. • Evaluate experiments to determine the probability of events using fractional representations from 0 to 1, including representations on a number line, and draw conclusions.

Fail/Below Basic	Fail/Basic	Pass/Proficient	Pass/Advanced
		<ul style="list-style-type: none">• Recognize, create and extend patterns, and construct, organize, and interpret bar graphs and line graphs from collected data.• Predict and describe outcomes of events using words and fractions from 0 to 1, including representations on a number line.• Recognize and demonstrate equality in equations, and identify the use of the associative property.	<ul style="list-style-type: none">• Identify equivalent relationships in equations, and apply the associative property.