Grade 6 Mathematics Performance Level Descriptors

Advanced: Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the **Advanced** level typically estimate and solve complex problems requiring unit conversions. Students use the distance between points and transformations to solve complex problems involving congruent figures. Students analyze the differences between two outcomes of simple experiments. Students solve complex and non-routine real-world problems, draw logical conclusions, and justify solutions.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level estimate, illustrate, and simplify the addition and subtraction of integers and assess the reasonableness of an answer. Students solve ratio and unit rate problems. Students estimate and illustrate the multiplication and division of non-negative rational numbers. Students evaluate the validity of the value of a variable. Students generate expressions, equations, and inequalities. Students interpret the solution of an equation and assess the reasonableness of the solution. Students determine the area of polygons and composite figures. Students use relationships between angles and the triangle sum theorem to solve problems. Students estimate and solve problems requiring unit conversion. Students predict transformations, analyze lines of symmetry, and use the distance between points and transformations to solve problems involving congruent figures. Students explain and justify which measure of central tendency provides the most descriptive information for a data set. Students create and analyze box-and-whisker plots and explain and compare possible outcomes of simple experiments. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Limited Knowledge: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Limited Knowledge** level read, order, represent, and explain rational numbers expressed as fractions, decimals, percents, and ratios. Students write positive integers as products of factors. Students illustrate or simplify the addition and subtraction of integers. Students identify and compare quantities, determine unit rates, and find equivalent fractions and percents. Students multiply and divide non-negative rational numbers. Students graph ordered pairs in all quadrants. Students represent reflective relationships between varying quantities. Students evaluate the value of a variable in expressions, equations, and inequalities. Students use number sense and properties of operations to solve equations and graph the solution. Students determine the area of parallelograms and triangles. Students identify angle relationships by name. Students identify and display the effect of transformations. Students identify lines of symmetry. Students calculate measures of central tendency, determine the sample space of simple experiments, and identify possible outcomes.

Unsatisfactory: Students have not performed at least at the Limited Knowledge level. Students scoring at the **Unsatisfactory** level should be given comprehensive mathematical instruction.