

Grade 4 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 mathematical problems and determine the unknown in non-equivalent expressions. Students compare decimals and fractions. Students solve complex money problems. Students determine a rule and extend a complex pattern. Students determine and represent unknown values in complex problems. Students determine volume. Students solve complex measurement problems. Students represent complex data sets and solve problems involving the data. 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 typically estimate and solve mathematical problems. Students use models to determine equivalent fractions, compare and order fractions, and add and subtract fractions. Students read and write decimals and make connections between decimals and fractions. Students determine change using coins. Students determine rules and extend patterns. Students determine unknown values in mathematical problems. Students describe parts of geometrical figures and identify similarities in three-dimensional figures. Students decompose and determine the area of polygons. Students solve measurement problems. Students represent data sets and solve problems involving the data. Students solve real-world problems and employ problem-solving strategies of identifying and using appropriate information.

Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level demonstrate the ability to estimate and solve simple mathematical problems. Students use models to determine simple equivalent fractions, compare and order whole numbers and simple fractions, and decompose fractions. Students read and write simple decimals and compare and order whole numbers and decimals. Students determine change using whole dollars. Students determine a rule and extend a simple pattern. Students determine unknown values in simple mathematical problems. Students identify quadrilaterals and determine the area of simple polygons. Students identify appropriate units and tools to measure. Students solve simple problems given a data set.

Below Basic: Students have not performed at least at the Basic level. Students scoring at the **Below Basic** level should be given comprehensive mathematical instruction.