

Grade 6 OCCT Mathematics Performance Level Descriptors (PLDs)

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: use a wide range of strategies to solve problems; regularly use various types of reasoning effectively; consistently connect one area or idea of mathematics to another; and communicate mathematical ideas through a variety of representations.

Proficient: Students demonstrate mastery over appropriate grade-level subject matter, and students are ready for the next grade level. Students scoring at the Proficient level typically will:

- Multiply, divide, estimate, compare, and convert fractions, mixed numbers, decimals and percents to solve single- and multi-step problems.
- Generalize and extend patterns and functions using tables, graphs, and number properties.
- Use substitution and the order of operations to simplify and evaluate algebraic expressions (including exponents and parentheses).
- Write and solve one-step equations with one variable using number sense, the properties of operations, and the properties of equality.
- Convert, compare, and order decimals, fractions, and percents using a variety of methods.
- Estimate and find solutions to single and multi-step problems using whole numbers, decimals, fractions, and percents.
- Build and recognize models of multiples to develop the concept of exponents and simplify numerical expressions with exponents and parentheses using order of operations.
- Compare and contrast the basic characteristics of three-dimensional figures.
- Compare and contrast congruent and similar figures.
- Use formulas to find the circumference and area of circles in terms of pi.
- Organize, construct displays, and interpret data to solve problems.
- Use the fundamental counting principle on sets with up to five items to determine the number of possible combinations.
- Find the measures of central tendency (mean, median, mode, and range) of a set of data and understand why a specific measure provides the most useful information in a given context.

Limited Knowledge: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Limited Knowledge level are inconsistent in applying the general knowledge and mathematical process skills at the Proficient level necessary to solve problems effectively and reason mathematically.

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