

Grade 7 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:

- Identify, describe, and analyze functional relationships (linear and nonlinear) between two variables.
- Write and solve two-step equations with one variable using number sense, the properties of operations, and the properties of equality.
- Model, write, solve, and graph one-step linear inequalities with one variable.
- Compare and order positive and negative rational numbers.
- Build and recognize models of perfect squares to find their square roots and estimate the square root of other numbers.
- Solve problems using ratios and proportions.
- Simplify numerical expressions with integers, exponents, and parentheses using order of operations.
- Classify regular and irregular geometric figures including triangles and quadrilaterals according to their sides and angles.
- Identify and analyze the angle relationships formed by parallel lines cut by a transversal.
- Construct geometric figures and identify geometric transformations on the rectangular coordinate plane.
- Find the area and perimeter of composite figures to solve application problems.
- Compare, translate, and interpret between displays of data.
- Determine the probability of an event involving “or”, “and”, or “not”.
- Compute the mean, median, mode, and range for data sets and understand how additional data or outliers in a set may affect the measures of central tendency.

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.