

## Grade 4 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:

- Be able to recognize, describe, and extend patterns.
- Be able to solve open sentences.
- Apply the associative property of multiplication.
- Understand place value to six digits and decimals to hundredths.
- Use 0,  $\frac{1}{2}$ , and 1 or 0, 0.5, and 1 as benchmarks and place additional fractions on a number line.
- Compare, add, or subtract fractional parts using physical or pictorial models.
- Estimate and find the product of up to three-digit by three-digit using a variety of strategies to solve application problems.
- Demonstrate fluency with basic division facts up to  $144 \div 12$  and the associated multiplication facts.
- Identify, draw, and construct models of intersecting, parallel, and perpendicular lines.
- Identify and compare angles to, less than, or greater than 90 degrees.
- Describe the effects on two-dimensional objects when they slide, flip, or turn.
- Solve application problems involving length, weight, mass, area, and volume using customary and metric measurement.
- Develop and use the concept of area of different shapes using grids to solve problems.
- Determine the correct amount of change when a purchase is made with at least a twenty dollar bill.
- Analyze and interpret data in graphs.
- Determine the median and mode of a set of data.

**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.