

Grade 4 OMAAP Mathematics Performance Level Descriptors (PLDs)

Advanced: Students consistently demonstrate an understanding of the knowledge and skills expected of students at this grade. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students demonstrate a general understanding of the mathematics knowledge skills and processes expected of students at this grade. Students scoring at the Satisfactory level typically will:

- Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models.
- Find variables in simple arithmetic problems by solving open sentences (equations) and other problems.
- Recognize and apply the associative property of multiplication.
- Apply the concept of place value to whole numbers.
- Model, read, write, and rename decimal numbers.
- Compare and order whole numbers and decimals.
- Place fractions, decimals, and percents on a number line.
- Compare, add, or subtract fractional parts.
- Estimate and find products to solve application problems.
- Demonstrate fluency with basic division facts and the associated multiplication facts.
- Estimate and find quotients to solve application problems.
- Identify, draw, and construct models of intersecting, parallel, and perpendicular lines.
- Identify and compare angles equal to, less than, or greater than 90 degrees.
- Identify, draw, and construct models of regular and irregular polygons to solve problems.
- Describe the effects on two-dimensional objects when they slide (translate), flip (reflect), and turn (rotate).
- Establish benchmarks for metric units and estimate the measures of a variety of objects using metric and customary units.
- Select appropriate customary and metric units of measure and measurement instruments to solve application problems involving length, weight, mass, area, and volume.
- Develop and use the concept of area to solve problems.
- Solve elapsed time problems.
- Read thermometers using different intervals and solve for temperature change.
- Determine the correct amount of change when a purchase is made with a twenty bill.
- Read and interpret data displays and use the observations to pose and answer questions.
- Collect, organize, and record data in tables and graphs.
- Predict the probability of outcomes of simple experiments.
- Determine the median (middle) and the mode (most often) of a set of data.

Limited Knowledge: Students demonstrate partial understanding of the mathematics knowledge, process, and skills expected of students at this grade. Students scoring at the Limited knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills at the Satisfactory level necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students do not demonstrate at least a Limited knowledge of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.