

## Grade 7 Mathematics ISAT Proficiency Level Descriptors

### Advanced

In the area of mathematics, seventh grade students typically performing at the Advanced level consistently demonstrate a **thorough understanding** of grade-level skills. These students

- demonstrate thorough understanding of place value, the numeration system, and estimation.
- perform challenging calculations.
- demonstrate firm understanding of measurement related to two-dimensional figures.
- apply multiple conversions between units of measure within each system.
- translate and evaluate complex numerical and algebraic expressions and equations.
- extend and describe challenging patterns presented in multiple formats.
- apply advanced geometric concepts related to size, shape, and spatial relationships.
- interpret, translate between, and recognize uncommon relationships of different types of data displays.
- demonstrate understanding of probability in complex situations.

### Proficient

In the area of mathematics, seventh grade students typically performing at the Proficient level demonstrate a **general understanding** of grade-level skills. These students

- demonstrate an understanding of place value, the numeration system, and estimation.
- perform grade-level calculations.
- understand measurements related to two-dimensional figures.
- convert units of measurement within each system.
- reduce rates to unit rates.
- identify properly constructed dimensional analysis conversions.
- translate and evaluate numerical and algebraic expressions and equations.
- solve one-step equations.
- extend and describe patterns.
- represent data in a table, as a graph, and as a mathematical relationship.
- apply geometric concepts related to size, shape, and spatial relationships.
- demonstrate an understanding of plotting points on a coordinate grid.
- read, interpret, and make predictions given information from tables, charts, and graphs.
- organize information into data displays.
- determine measures of central tendency.
- demonstrate understanding of simple probability.

## **Basic**

In the area of mathematics, seventh grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills. These students

- demonstrate limited understanding of place value, the numeration system, and estimation.
- perform simple calculations.
- demonstrate limited understanding of measurements related to two-dimensional figures.
- convert simple units of measurement.
- show limited understanding of unit rates and dimensional analysis.
- translate and evaluate simple numerical and algebraic expressions and equations.
- solve simple one-step equations.
- extend simple patterns.
- apply simple geometric concepts.
- have limited understanding of plotting points on a coordinate grid beyond the first quadrant.
- read basic displays of data.
- demonstrate limited understanding of central tendency.
- recognize basic concepts of simple probability.