Grade 7 Proficiency Level Descriptors

Minimal

Students performing at the minimal level are beginning to apply their 7th grade mathematics skills. Students recognize, but may have difficulty representing rational numbers as fractions, decimals, and percents. They are learning to compare and order some rational numbers, and identify their relationships. They are beginning to estimate and compute with integers, positive fractions, and decimals. Students have difficulty solving simple problems involving ratios, rates, percents, proportions, and measures. They convert basic measurements and are developing an understanding of scale factors. Students attempt to evaluate and simplify some basic expressions. They are learning to identify real-world relationships using coordinate graphs, tables, equations, manipulatives, and pictures. Students draw and label lines, angles, triangles, and quadrilaterals but do not recognize geometric relationships. They have difficulty estimating and measuring the length, area, and angles of everyday objects with metric and customary units. Students have difficulty selecting and using formulas to calculate the measurement of everyday objects. They may be able to write the results of probability experiments as fractions, but not yet as ratios, decimals, or percents. Using tables, scatter plots, and circle graphs, students identify displayed data, and begin to compare data to make predictions and formulate conclusions.

Partial

Students performing at the partial level inconsistently apply their 7th grade mathematics skills. Students represent rational numbers as fractions, decimals, and percents, and may have difficulty converting them from one form to another. They compare, and describe relationships among some rational numbers. They may be able to estimate and compute with integers, positive fractions, and decimals, incorporating the use of algebraic properties. Students solve simple problems involving ratios, rates, percents, proportions, and measures. They convert basic measurements and are learning to use scale factors. Students evaluate and simplify basic expressions and solve one-step single-variable algebraic equations. They identify real-world relationships using coordinate graphs, tables, equations, manipulatives, and pictures. Students draw, label, and describe lines, angles, triangles, and quadrilaterals but inconsistently recognize geometric relationships. Using metric and customary systems, they estimate and measure the length, area, and angles of everyday objects with limited accuracy. Students select formulas to calculate the perimeter, area, surface area and volume of everyday objects but do not always calculate the value correctly. They may be able to write the results of probability experiments as fractions, ratios, decimals, or percents, and are learning to compare results of experiments with theoretical probability. Using tables, scatter plots, and circle graphs, students inconsistently display and compare data, and attempt to make predictions and formulate conclusions.

Grade 7 Proficiency Level Descriptors

Sufficient

Students performing at the sufficient level apply 7th grade mathematics skills appropriately. Students represent, convert, order and describe relationships among rational numbers as fractions, decimals and percents. They estimate and compute with integers, positive fractions, and decimals, using algebraic properties and solve problems involving ratios, rates, percents, proportions, and measures. They convert measurements and use scale factors. Students evaluate and simplify expressions and solve single-variable algebraic equations and inequalities. Students represent real-world relationships using coordinate graphs, tables, equations, manipulatives, and pictures. They draw, label, and describe attributes of lines, angles, triangles, and quadrilaterals to determine geometric relationships. They estimate and measure the length, area, and angles of everyday objects using metric and customary units. Students calculate the measurement of everyday objects using formulas for perimeter, area, surface area, and volume. They write the results of probability experiments as fractions, ratios, decimals, or percents and compare results of experiments with theoretical probability. Students use tables, scatter plots, and circle graphs, to display and compare data to make predictions and formulate conclusions.

Substantial

Students performing at the substantial level consistently apply 7th grade mathematics skills appropriately. They fluently represent, convert, order and describe relationships among numbers as fractions, decimals and percents. They accurately estimate and compute with integers, positive fractions, and decimals, incorporating the use of algebraic properties. Students proficiently solve problems involving ratios, rates, percents, proportions, and measures. They convert measurements and accurately use scale factors. Students evaluate and simplify expressions and solve single-variable algebraic equations and inequalities. They represent and interpret real-world relationships using coordinate graphs, tables, equations, manipulatives, and pictures. Students draw, label, and describe attributes of lines, angles, triangles, and quadrilaterals to analyze geometric relationships. Using metric and customary systems, they estimate and accurately measure the length, area, and angles of everyday objects. Students proficiently use formulas to calculate the perimeter, area, surface area, and volume of everyday objects. They make connections between different representations of probability experiments (fractions, ratios, decimals, or percents) and critically compare results of experiments with theoretical probability. Using tables, scatter plots, and circle graphs, students consistently display, compare, and analyze data to make predictions and formulate conclusions.