Connecticut Alternate Assessment:

Individual Student Report Performance Literals Mathematics

Purpose

This document is intended as a resource to district and school personnel. The Individual Student Report Performance Literals in Mathematics provide the description of each of the 4 performance levels shared on the paper version of the Connecticut Alternate Assessment (CTAA) Individual Student Reports. These reports were provided to eligible students with significant cognitive disabilities who participated in administration of the CTAA. The CTAA Individual Student Report Performance Level Literals are limited descriptions of the grade specific alternate assessment skills students receiving these levels can demonstrate. More in-depth descriptions can be found in the CTAA Math Performance Level Descriptors and the 2017 Guide for CTAA Score Report Interpretation.

Mathematics Grade 3

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple addition problems with numerals and symbols; read a pictograph; identify growing patterns with pictures, objects, or shapes; identify the number of parts shaded in an object; identify an object that has the greater number of parts shaded; and identify an object divided in two equal parts.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple addition, subtraction, and multiplication problems using mathematical language and symbolic representations (e.g., <, >, =); use objects to represent a multiplication problem; identify the next term in a list of numbers that follow a pattern; identify a number nearer to 1 or 10; and identify a rectangle that is divided into equal parts.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve addition, subtraction, and multiplication problems using mathematical language and symbolic representations (e.g., <, >, =); check the correctness of an answer; find the missing term in a list of numbers that follow a pattern; round numbers; identify figures divided into equal parts; compare fraction models; count unit squares to total the area of a rectangle; and complete a bar graph.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: find the missing term in a list of numbers that follow a pattern; compare fractions with different numerators and the same denominator; round numbers; apply appropriate concepts of quantities and operations to mathematical situations to solve addition, subtraction, and multiplication word problems; check the correctness of an answer; count unit squares to total the area of a rectangle; and complete a bar graph.

Mathematics Grade 4

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with numerals and symbols related to rounding whole numbers; understand the meaning of equivalent whole numbers and fractions; identify a rectangle with the larger or smaller perimeter; identify the greatest value in a bar graph; and identify the sides and angles of a rectangle.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple multiplication problems using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); round numbers; identify parts and wholes; identify equivalent fractions; identify one set of objects divided into two equal parts; identify the parts of 2-dimensional shape; and compute the perimeter of a rectangle.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve multiplication word problems using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); check the correctness of an answer; show division of objects into two equal groups; round numbers; identify equivalent and non-equivalent fractions; sort a set of 2-dimensional shapes; compute the perimeter of a rectangle; and transfer data to a graph.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: round numbers; identify equivalent and non-equivalent fractions with different denominators; sort a set of 2-dimensional shapes; transfer data to a graph; apply appropriate concepts of quantities and operations to mathematical situations to solve multiplication word problems; check the correctness of an answer; divide a set of objects into equal groups; and compute the perimeter of a rectangle.

Mathematics Grade 5

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple subtraction problems with numerals and symbols; identify place values; measure with feet and yards; read time on an analog clock; read graphs; and recognize how one set of objects can be divided into two equal parts.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with decimals using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); identify place values; round decimal numbers; identify the effects of addition and multiplication; identify a representation of addition of fractions; and convert standard measurements.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve problems with whole numbers, fractions or decimals using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); identify place values; round decimals; identify the effects of multiplication; convert standard measurements including minutes and hours; locate a given point on a coordinate plane; and make comparisons between data sets.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: identify place value; round decimals; convert standard measurements including minutes and hours; locate a given point on a coordinate plane when given an ordered pair; apply appropriate concepts of quantities and operations to mathematical situations to solve word problems with whole numbers, fractions, or decimals; and make comparisons between line graphs.

Mathematics Grade 6

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with numerals and symbols related to percent, rates, number lines, and area; identify what an unknown represents in an equation; and describe data sets.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with whole numbers or decimals using mathematical language and symbolic representations (e.g., $<$, $>$, $=$) about ratios, negative numbers, and fractions; describe data sets; and solve real world measurement problems using percent or rates.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of positive and negative values on a number line; describe mean, median or mode in a data set; solve problems with whole numbers or decimals using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); solve word problems with percent, ratios, rates, or with a variable; and compute the area of a parallelogram.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of positive and negative values; describe mean, median or mode in a data set; apply appropriate concepts of quantities and operations to mathematical situations to solve problems using three-digit numbers or decimals; solve word problems with percent, ratios, rates, or with a variable; and compute the area of a parallelogram.

Mathematics Grade 7

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with numerals and symbols related to a negative number and its multiplication or division by a positive number; identify surface area, area and circumference of a circle; and read a bar graph.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple multiplication problems with positive/negative whole numbers using mathematical language and symbolic representations (e.g., $<$, $>$, $=$); identify the meaning of an unknown variable in an equation; describe a ratio; identify the surface area of a three-dimensional figure; and determine when a graph of a data set is increasing or decreasing.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of ratios and rates; identify proportional measures of two quantities; solve multiplication and division problems using mathematical language and symbolic representations (e.g., $<$, $>$, $=$) with positive/negative whole numbers, percent, ratios or unknowns; and compute the area of a circle, and surface area of a three-dimensional shape.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of ratios and rates; identify proportional relationships between two quantities shown in a table or graph; apply appropriate concepts of quantities and operations to mathematical situations to solve problems using positive/negative whole numbers, percent, ratios or unknowns; and compute the area of a circle and surface area of a three-dimensional shape.

Mathematics Grade 8

Level 1

Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems with numerals and symbols related to decimal numbers; identify congruent and similar shapes, and surface area; plot points on a graph; and identify larger and smaller quantities presented in a graph.

Level 2

Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple problems using mathematical language and symbolic representations (e.g., $<$, $>$, $=$, x, y); identify and describe proportional measures of two quantities presented in graphs and data tables; identify the y-intercept of a graph; match congruent or similar figures; and relate a graph to the context of a word problem.

Level 3

Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: determine approximate value of irrational numbers; identify congruent and similar figures; describe the relationship between two variables shown on a graph; plot data on a graph; use mathematical language and symbolic representations (e.g., $<$, $>$, $=$, x, y) to solve problems about: slope of a linear graph; the change in area of a figure when its dimensions are changed; and the volume of a cylinder.

Level 4

Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of congruent and similar figures; determine approximate value of irrational numbers; identify and describe the relationship between two variables shown on a graph; plot data on a graph; apply appropriate concepts of quantities and operations to mathematical situations to solve problems about: linear equations; slope of a linear graph, the change in area of a figure when its dimensions are changed; and the volume of a cylinder.

Mathematics Grade 11

Level 1
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple real world problems with numerals and symbols; write equations; represent quantities in multiple combinations; complete the formula for area of a figure; determine whether a given point is or is not part of a data set shown on a graph; and identify an extension of a line graph.

Level 2
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: solve simple word problems using mathematical language and symbolic representations (e.g., $<$, $>$, $=$, x, y), write equations that contain a variable; solve a real world problem using a line graph; calculate the mean and median of a set of data; identify the hypotenuse of a right triangle; the greatest or least value of data shown on a number line; the missing label on a histogram; and a model that represents a square number.

Level 3
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of how to represent and interpret data using histograms; work with exponents; identify features of a three-dimensional figure; use measurements to find similar triangles; solve real world problems using mathematical language, symbolic representations (e.g., $<$, $>$, $=$) and variables (x, y) or with a line graph; solve real world measurement problems that require unit conversion; calculate the mean and median of a set of data; and make predictions from data tables and graphs to solve problems.

Level 4
Children performing at this level use built-in supports to show what they know and can do. A child is generally able to: demonstrate an understanding of how to represent and interpret data using histograms; work with exponents; identify features of a three-dimensional figure; use measurements to find similar triangles; apply appropriate concepts of quantities and operations to mathematical situations to solve real world problems using variables (x, y) or with a line graph; solve real world measurement problems that require unit conversion; calculate the mean and median of a set of data; and make predictions from data tables and graphs to solve problems.