

Nebraska



Nebraska Student-Centered Assessment System (NSCAS) Alternate Assessment

Mathematics–Grade 4 Table of Specifications for Students with Significant Disabilities who take the Statewide Alternate Assessment

Mathematics Grade 4 Alternate Assessment Table of Specifications				
	DOK Stage 2	DOK Stage 3	DOK Stage 4	Item Total
Number				
Numeric Relationships: Students will demonstrate and represent multi-digit numbers using relationships with the base-ten number system.				
4.N.1.a Read, write, and demonstrate multiple equivalent representations for whole numbers up to 1,000,000 and decimals to the hundredths using visual representations, standard form, and expanded form.				
4.N.1.a Identify representations of whole numbers up to 100.	0-2	0-4	0-2	0-4
4.N.1.b Represent and justify comparisons of whole numbers up to 1,000,000 and decimals through the hundredths place using number lines and reasoning strategies.				
4.N.1.b Use symbols <, >, and = to compare whole numbers up to 50.	0-2	0-4	0-2	0-4
4.N.1.d Use decimal notation for fractions with denominators of 10 or 100 (e.g., $43/100 = 0.43$).				
4.N.1.d Use decimal notation for fractions from 0 to 1 with a denominator of 10 (e.g., $2/10 = .2$), and identify those decimals on a number line from 0 to 1.	0-2	0-4	0-2	0-4
Fractions and Decimals: Students will extend understanding of fractions by equivalence and ordering and will develop an understanding of decimals.				
4.N.2.a Explain and demonstrate how a mixed number is equivalent to a fraction greater than one and how a fraction greater than one is equivalent to a mixed number using visual fraction models and reasoning strategies.				
4.N.2.a Compare and order mixed numbers with denominators up to 5.	0-2	0-4	0-2	0-4
Operations with Fractions: Students will understand and demonstrate fractional computation.				
4.N.3.c Add and subtract fractions and mixed numbers with like denominators.				
4.N.3.c Use visual models to add and subtract fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole.	0-2	0-4	0-2	0-4
4.N.3.d Solve authentic problems involving addition and subtraction of fractions and mixed numbers with like denominators.				
4.N.3.d Use visual models to solve authentic problems involving addition and subtraction of fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole.	0-2	0-4	0-2	0-4
Factors and Multiples: Students will find factors and multiples and classify numbers as prime or composite.				
4.N.4.a Determine whether a given whole number up to 100 is a multiple of a given one-digit number.				
4.N.4.a Count by 2s, 5s, and 10s with numbers, models, or objects up to 50.	0-2	0-4	0-2	0-4
4.N.4.b Determine factors of any whole number up to 100 and classify a number up to 100 as prime or composite.				
4.N.4.b Identify numbers 1–20 as odd or even, and identify the factors of 4, 6, 8, 9, 10, 12, 15, and 20.	0-2	0-4	0-2	0-4

Algebra				
Operations and Algebraic Thinking: Students will extend understanding of multiplication and division and apply operational properties to solve problems involving variables.				
4.A.1.a Add and subtract multi-digit numbers using an algorithm.				
4.A.1.a Add and subtract numbers with regrouping, limited to two-digit addends and minuends.	0-2	0-4	0-2	0-4
4.A.1.b Multiply up to a four-digit whole number by a one-digit whole number and multiply a two-digit whole number by a two-digit whole number, using strategies based on place value, properties of operations, and algorithms.				
4.A.1.b Multiply 2s, 5s, and 10's by a single-digit number with a maximum product of 100.	0-2	0-4	0-2	0-4
4.A.1.c Divide up to a four-digit whole number by a one-digit divisor with and without a remainder using strategies based on place value.				
4.A.1.c Identify division equations, and use models (e.g., number lines, repeated addition, equal groups, arrays) to represent division without a remainder, limited to groups up to 20.	0-2	0-4	0-2	0-4
4.A.1.d Determine the reasonableness of whole number products and quotients using estimations and number sense.				
4.A.1.d Round one- and two-digit whole numbers to estimate two-digit products.	0-2	0-4	0-2	0-4
4.A.1.e Create a simple algebraic expression or equation using a variable for an unknown number to represent an authentic mathematical situation (e.g., $3 + n = 15$, $81 \div n = 9$).				
4.A.1.e Identify an addition or subtraction equation in an authentic mathematical situation using a variable for an unknown, limited to an unknown change or unknown result (e.g., $3 + n = 10$, $12 - 6 = n$).	0-2	0-4	0-2	0-4
4.A.1.f Solve one- and two-step authentic problems using the four operations including interpreting remainders and the use of a letter to represent the unknown quantity.				
4.A.1.f Solve one-step authentic problems involving addition and subtraction and including the use of a letter to represent an unknown quantity, limited to two-digit addends and minuends.	0-2	0-4	0-2	0-4
Geometry				
Shapes and Their Attributes: Students will draw and identify lines and angles and classify shapes by properties of their lines and angles.				
4.G.1.a Identify, create, and describe points, lines, line segments, rays, angles, parallel lines, perpendicular lines, and intersecting lines.				
4.G.1.a Identify points, lines, line segments, rays, angles, parallel lines, and intersecting lines.	0-2	0-3	0-2	0-3
4.G.1.b Justify the classification of angles as acute, obtuse, or right.				
4.G.1.b Classify angles as acute, obtuse, or right.	0-2	0-3	0-2	0-3

4.G.1.c Justify the classification of two-dimensional shapes based on the presence or absence of parallel and perpendicular lines or the presence or absence of specific angles.				
4.G.1.c Classify quadrilaterals based on the presence or absence of parallel and perpendicular lines and the presence or absence of right angles.	0-2	0-3	0-2	0-3
4.G.1.d Recognize, draw, and justify lines of symmetry in two-dimensional shapes.				
4.G.1.d Identify lines of symmetry in two-dimensional shapes.	0-2	0-3	0-2	0-3
Measurement: Students will generate simple conversions from a larger unit to a smaller unit to solve authentic problems and measure angles.				
4.G.2.a Identify and use the appropriate tools, operations, and units of measurement, both customary and metric, to solve authentic problems involving time, length, weight, mass, and capacity.				
4.G.2.a Identify and use the appropriate units of measurement to solve authentic problems involving time, length, weight, and liquid volume, using customary units.	0-2	0-3	0-2	0-3
4.G.2.c Generate simple conversions from a larger unit to a smaller unit within the customary and metric systems of measurement.				
4.G.2.c Generate simple conversions from larger units to smaller units, using weeks/days, years/months, hours/minutes, or feet/inches.	0-2	0-3	0-2	0-3
4.G.2.d Measure angles in whole number degrees using a protractor and relate benchmark angle measurements to their rotation through a circle (e.g., $180^\circ = 1/2$ of a circle).				
4.G.2.d Identify benchmark angles of 90° and 180°, and relate those angle measurements to right angles, straight lines, and perpendicular lines.	0-2	0-3	0-2	0-3
Area and Perimeter: Students will apply perimeter and area formulas for rectangles.				
4.G.3.a Apply perimeter and area formulas for rectangles to solve authentic problems.				
4.G.3.a Apply perimeter formulas for rectangles to solve authentic problems.	0-2	0-3	0-2	0-3
Data				
Data Collection: Students will formulate questions to collect, organize, and represent data.				
4.D.1.a Generate and represent data using line plots where the horizontal scale is marked off in appropriate units—whole numbers, halves, fourths, or eighths.				
4.D.1.a Identify and compare quantities in line plots, limited to two data points.	0-2	0-6	0-2	0-6
Analyze Data and Interpret Results: Students will analyze the data and interpret the results.				
4.D.2.a Solve authentic problems and analyze data involving addition or subtraction of fractions presented in line plots.				
4.D.2.a Solve problems with addition or subtraction of whole numbers using information from pictographs, bar graphs, and line plots.	0-2	0-6	0-2	0-6