

Nevada Alternate Assessment

Nevada Academic Content Standard
Connectors for Mathematics
Grade 4

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Nevada Academic Content Connectors

The Nevada Academic Content Connectors (NACC) for Math represents the academic skills upon which students to be instructed. The NACCs for Math are linked to the Nevada Academic Content Standards and represent the key academic knowledge, skills and abilities of the Math content at each grade level. The Nevada Alternate Assessment, for Mathematics, will report to the Smarter Balanced Claims for Mathematics.

- **Claim #1- Concepts & Procedures**-“Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.”
- **Claim #2 – Problem Solving** “Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.”
- **Claim #3 – Communicating Reasoning** “Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.”
- **Claim #4- Modeling and Data Analysis**- “Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.”

Example:

Nevada Academic Content Standards (NVACS)	NVAC Connectors
<p><i>Math Content Standard</i> 4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</p>	<p>Represent a multiplication equation as a comparison. <i>Connector to the content standard</i></p>
<p><i>Math Content Standard</i> 4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.</p>	<p>Using pictures or equations to solve word problems involving multiplicative comparison. <i>(Connector to the content standard)</i></p>

Nevada Department of Education

The Nevada Alternate Assessment was developed to allow students an opportunity to fully demonstrate their knowledge in each content area. This ability to demonstrate knowledge of core content and skills is critical as educators seek to provide access to the general education curriculum while fostering higher expectations for students with significant cognitive disabilities.

NAA Mathematics NVAC Connectors

Grade 4

Use the four operations with whole numbers to solve problems.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	Represent a multiplication equation as a comparison.
4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Using pictures or equations to solve word problems involving multiplicative comparison.

Generalize place value understanding for multi-digit whole numbers.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	Recognize, in a two-digit number, the value represented by a digit in the tens place and the ones place.
4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	Read, write, and compare whole numbers.
4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.	Round whole numbers to the nearest 100.

Use place value understanding and properties of operations to perform multi-digit arithmetic.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Fluently add and subtract multi-digit whole numbers, with regrouping.

Extend understanding of fraction equivalence and ordering.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.	Compare two fractions using models with same denominators or same numerators.

Solve problems involving measurement and conversion of measurements.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	Determine smaller or larger units in a single system of measurement.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
<p>4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>	<p>Solve word problems involving whole number distances, time, and money using addition and subtraction.</p>

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
<p>4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p>	<p>Identify parallel lines, perpendicular lines, points, and angles.</p>
<p>4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</p>	<p>Identify a line of symmetry for a two-dimensional figure.</p>

Gain familiarity with factors and multiples.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.OA.B.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	Identify the factors and multiples of a whole number.

Solve problems involving measurement and conversation of measurements.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	Determine the perimeter or area of a basic shape.

Represent and interpret data.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots.	Solve real-world problems using a line plot.

Extend understanding of fraction equivalence and ordering.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.NF.A.1 Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{n \times a}{n \times b}$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	Using two different fraction models, to determine equivalence.

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right	Identify two-dimensional figures based on an attribute.

**Nevada Academic
Content Standards
(NVACS)**

NVAC Connectors

triangles.