Nevada Alternate Assessment

Nevada Academic Content Standard
Connectors for Mathematics
Grade 11

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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
Math Content Standard **HSN.Q.A.1** **Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.**	Choose the appropriate scale to display a given set of data.***(Connector to the content standard)***
Math Content Standard **HSA.SSE.A.1** **Interpret expressions that represent a quantity in terms of its context.** **HAS.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.**	Given an expression that models a simple context, interpret parts of an expression, such as terms and coefficients . ***(Connector to the content standard)***

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 11

Reason quantitatively and use units to solve problems

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSN.Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	Choose the appropriate scale to display a given set of data.

Interpret the structure of expressions

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSA.SSE.A.1 Interpret expressions that represent a quantity in terms of its context. **HAS.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.**	Given an expression that models a simple context, interpret parts of an expression, such as terms and coefficients.
HSA.SSE.A.2 Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.	Identify equivalent expressions.

Perform arithmetic operations on polynomials

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSA.APR.A.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Add simple polynomials.

Interpret functions that arise in applications in terms of the context

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSF.IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.	Identify key features for a linear or quadratic function, given a graph or table.
HSF.IF.B.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function *h*(*n*) gives the number of person-hours it takes to assemble *n* engines in a factory, then the positive integers would be an appropriate domain for the function.	Identify an appropriate domain of a function, given a table or a graph.

Summarize, represent, and interpret data on a single count or measurement variable

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSS.ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).	Identify and/or generalize data with plots on the real number line (dot plots and histograms), given a data set.

Interpret linear models

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSS.ID.C.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	Given a graph and a real-world situation, interpret the slope of a linear model.

Create equations that describe numbers or relationships

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSA.CED.A.1 Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	Solve problems using linear equations and linear inequalities.
HSA.CED.A.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Identify a graph representing a given linear relationship.

Solve systems of equations

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSA.REI.C.5 Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	Identify the solution of a system of two linear equations represented graphically.

Understand similarity in terms of similarity transformations

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSG.SRT.A.1 Verify experimentally the properties of dilations given by a center and a scale factor. **HSG.SRT.A.1.a A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.** **HSG.SRT.A.1.b The dilation of a line segment is longer or shorter in the ratio given by the scale factor.**	Given a line segment and its dilation, identify the scale factor of the dilation.

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSG.SRT.A.2 Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.	Identify similar figures using transformations.

Make inferences and justify conclusions from sample surveys, experiments, and observational studies

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSS.IC.B.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	Use data from an experiment to answer questions about effect of a treatment on the control group.
HSS.IC.B.6 Evaluate reports based on data.	Determine important information from data-based reports

Extend the properties of exponents to rational exponents

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSN.RN.B.3 Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	Identify a sum of two numbers as rational, irrational, or an integer.

Visualize relationships between two-dimensional and three-dimensional objects

Nevada Academic Content Standards (NVACS)	NVAC Connectors
HSG.GMD.B.4 Identify the shapes of two-dimensional cross sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	Identify three-dimensional objects based on their cross-sections.