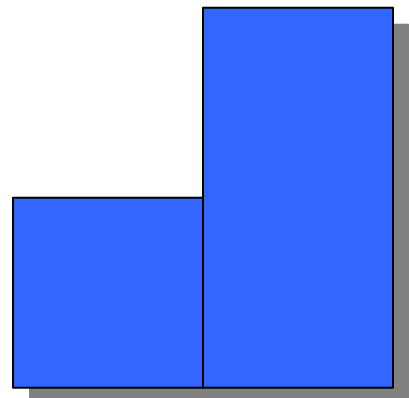


ASSESSED PERFORMANCE STANDARDS

**ALASKA HIGH SCHOOL GRADUATION
QUALIFYING EXAMINATION**



READING PERFORMANCE STANDARDS FOR THE HSGQE

- R4.1** Apply knowledge of syntax, roots, and word origins, and use context clues and reference materials, to determine the meaning of new words and to comprehend text.
- R4.2** Summarize information or ideas from a text and make connections between summarized information or sets of ideas and related topics or information.
- R4.3** a. Identify and assess the validity, accuracy, and adequacy of evidence that supports an author's main ideas. b. Critique the power, logic, reasonableness, and audience appeal of arguments advanced in public documents.
- R4.4** Read and follow multi-step directions to complete complex tasks.
- R4.7** Express and support assertions, with evidence from the text or experience, about the effectiveness of a text.
- R4.8** Analyze and evaluate themes across a variety of texts, using textual and experiential evidence.

WRITING PERFORMANCE STANDARDS FOR THE HSGQE

- W4.1** Write a coherent composition with a thesis statement that is supported with evidence, well-developed paragraphs, transitions, and a conclusion.
- W4.2** Demonstrate understanding of elements of discourse (purpose, speaker, audience, form) when completing expressive (creative, narrative, descriptive), persuasive, research-based, informational, or analytic writing assignments.
- W4.3** Use the conventions of Standard English independently and consistently including grammar, sentence structure, paragraph structure, punctuation, spelling, and usage.
- W4.4** Revise writing to improve style, word choice, sentence variety, and subtlety of meaning in relation to the purpose and audience.

MATHEMATICS PERFORMANCE STANDARDS FOR THE HSGQE

NOTE: Clarifying comments for the HSGQE are in italics. Some performance standards are not in the full versions found in the Alaska Standards booklet; if certain aspects of a performance standard are not assessed on the HSGQE, they are not included in this document.

Numeration

- M1.3.1** Read, write, model, and order real numbers, explaining scientific notation (*read only*), exponents (*square and cube only*) and percents.
- M1.2.2** Use, model, and identify place value positions from 0.001 to 1,000,000.
- M1.4.3** Compare and contrast the relationship between various applications of the same operation.
- M1.4.4** Translate between equivalent representations of the same number, *including simple exponents*. Select a representation that is appropriate for the situation.
- M1.3.4** Describe and model the relationship of fractions to decimals, percents, ratios and proportions.
- M1.3.5** Use, explain, and define the rules of divisibility, prime and composite numbers, multiples, and order of operations.
- M1.4.5** Recognize, describe, and use properties of the real number system.

Measurement

- M2.3.1** Estimate and measure various dimensions to a specified degree of accuracy.
- M2.4.2** Estimate and convert measurements between different systems.
- M2.2.3** Use a variety of measuring tools; describe the attribute(s) they measure.
- M2.3.4** Describe and apply the relationships between dimensions of geometric figures to solve problems using indirect measurement; describe and apply the concepts of rate and scale.
- M2.3.5** Apply information about time zones and elapsed time to solve problems.
- M2.2.6** Read, write, and use money notation, determining possible combinations of coins and bills to equal given amounts; count back change for any given situation.

Estimation and Computation

- M3.4.1** Use estimation to solve problems and to check the accuracy of solutions; state whether the estimation is greater or less than the exact answer.
- M3.3.2** Apply basic operations efficiently and accurately, using estimation to check the reasonableness of results.
- M3.4.2** Add and subtract real numbers using powers.
- M3.4.3** Multiply and divide real numbers in various forms including powers.
- M3.3.5** Convert between equivalent fractions, decimals, percents, and proportions. Convert from exact to decimal representations of irrational numbers.
- M3.4.5** Use ratios and proportions to model and solve fraction and percent problems with variables.

Functions and Relationships

- M4.3.1** Identify numeric and geometric patterns to find the next term and predict the n th term.
- M4.4.2** Create and solve linear equations and inequalities.
- M4.4.3** Create and solve simple systems of equations.
- M4.3.4** Translate among and use tables of ordered pairs, graphs on coordinate planes, and linear equations as tools to represent and analyze patterns.
- M4.3.5** Find the value of a variable by evaluating formulas and algebraic expressions for given values.

Geometry

- M5.3.1** Identify, classify, compare, and sketch regular and irregular polygons.
- M5.2.2** Compare and contrast plane and solid figures (e.g., circle/sphere, square/cube, triangle/pyramid) using relevant attributes, including the number of vertices, edges, and the number and shape of faces.
- M5.3.3** Apply the properties of equality and proportionality to solve problems involving congruent or similar shapes.
- M5.3.4** Estimate and determine volume and surface areas of solid figures using manipulatives and formulas; estimate and find circumferences and areas of circles.
- M5.2.6** Locate and describe objects in terms of their position with and without compass directions; identify coordinates for a given point or locate points of given coordinates on a grid.
- M5.2.7** Sketch and identify line segments, midpoints, intersections, parallel, and perpendicular lines.

Statistics/Probability

- M6.3.1** Collect, analyze, and display data in a variety of visual displays including frequency distributions, circle graphs, histograms, and scatter plots.
- M6.3.2** Interpret and analyze information found in newspapers, magazines, and graphical displays.
- M6.3.3** Determine and justify a choice of mean, median, or mode as the best representation of data for a practical situation.
- M6.3.4** Make projections based on available data and evaluate whether or not inferences can be made given the parameters of the data.
- M6.1.4** Find and record the possibilities of simple probability experiments; explain differences between chance and certainty, giving examples.
- M6.2.5** Conduct simple probability experiments using concrete materials and represent the results using fractions and probability.

*** Process Skills**

(Problem Solving, Communication, Reasoning, Connections)

- M8.3.3** Use appropriate vocabulary, symbols, and technology to explain, justify, and defend mathematical solutions.
- M7.2.2** Select and apply a variety of strategies including making a table, chart or list, drawing pictures, making a model, and comparing with previous experience to solve problems.
- M10.3.1** Apply mathematical skills and processes to science and humanities.
- M10.3.2** Apply mathematical skills and processes to situations with peers and community

* Process skills are assessed but not separately reported on individual student reports.