Mathematics Grade 11

PA Alternate Eligible Content

PA Core Standards:
CC.2.1.HS.F.1: Apply and extend the properties of exponents to solve problems with rational exponents.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.1.HS.F.2: Apply properties of rational and irrational numbers to solve real world or mathematical problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.1.HSF2a	**Convert between fractions and decimals in a real-world problem**

PA Core Standards:
CC.2.1.HS.F.3: Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.1.HSF3a	**Identify and interpret scale in a real-world problem**

PA Core Standards:
CC.2.1.HS.F.4: Use units as a way to understand problems and to guide the solution of multi-step problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.1.HSF4a	**Determine the necessary units and solve a real-world problem**

PA Core Standards:
CC.2.1.HS.F.5: Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.1.HS.F.6: Extend the knowledge of arithmetic operations and apply to complex numbers.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.1.HS.F.7: Apply concepts of complex numbers in polynomial identities and quadratic equations to solve problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.C.1: Use the concept and notation of functions to interpret and apply them in terms of their context.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSC1a	**Determine the missing coordinates in a table of values containing at least 2 complete ordered pairs**

PA Core Standards:

CC.2.2.HS.C.2: Graph and analyze functions and use their properties to make connections between the different representations.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:

CC.2.2.HS.C.3: Write functions or sequences that model relationships between two quantities.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSC3a	**Describe the linear relationship between two variables displayed in a table of values**

PA Core Standards:

CC.2.2.HS.C.4: Interpret the effects transformations have on functions and find the inverses of functions.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:

CC.2.2.HS.C.5: Construct and compare linear, quadratic, and exponential models to solve problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSC5a	**Interpret the effect of a change in one variable on the other variable using graphs or tables**
CC.2.2.HSC5b	**Interpret a graphical representation of a linear model in a real-world problem**

PA Core Standards:
CC.2.2.HS.C.6: Interpret functions in terms of the situations they model.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.C.7: Apply radian measure of an angle and the unit circle to analyze the trigonometric functions.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.C.8: Choose trigonometric functions to model periodic phenomena and describe the properties of the graphs.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.C.9: Prove the Pythagorean identity and use it to calculate trigonometric ratios.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.1: Interpret the structure of expressions to represent a quantity in terms of its context.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSD1a	**Select an algebraic expression using any of the four operations and solve a real-world problem**

PA Core Standards:
CC.2.2.HS.D.2: Write expressions in equivalent forms to solve problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.3: Extend the knowledge of arithmetic operations and apply to polynomials.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.4: Understand the relationship between zeros and factors of polynomials to make generalizations about functions and their graphs.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.5: Use polynomial identities to solve problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.6: Extend the knowledge of rational functions to rewrite in equivalent forms.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.2.HS.D.7: Create and graph equations or inequalities to describe numbers or relationships.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSD7a	**Translate a real-world problem into a one-variable equation**

PA Core Standards:
CC.2.2.HS.D.8: Apply inverse operations to solve equations or formulas for a given variable.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSD8a	**Solve a linear equation to find a missing attribute when determining area or volume**

PA Core Standards:
CC.2.2.HS.D.9: Use reasoning to solve equations and justify the solution method.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.2.HSD9a	**Order a given sequence of steps to solve an equation**

PA Core Standards:
CC.2.2.HS.D.10: Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.

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PA Core Standards:
CC.2.3.HS.A.1: Use geometric figures and their properties to represent transformations in the plane.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.2: Apply rigid transformations to determine and explain congruence.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.3: Verify and apply geometric theorems as they relate to geometric figures.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.4: Apply the concept of congruence to create geometric constructions.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.5: Create justifications based on transformations to establish similarity of plane figures.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.6: Verify and apply theorems involving similarity as they relate to plane figures.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.7: Apply trigonometric ratios to solve problems involving right triangles.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.8: Apply geometric theorems to verify properties of circles.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.9: Extend the concept of similarity to determine arc lengths and areas of sectors of circles.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.10: Translate between the geometric description and the equation for a conic section.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.11: Apply coordinate geometry to prove simple geometric theorems algebraically.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.12: Explain volume formulas and use them to solve problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT

PA Core Standards:
CC.2.3.HS.A.13: Analyze relationships between two-dimensional and three dimensional objects.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.3.HSA13a	**Match corresponding two-dimensional and three-dimensional representations**

PA Core Standards:
CC.2.3.HS.A.14: Apply geometric concepts to model and solve real world problems.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.3.HSA14a	**Compare the area of two objects with one equivalent attribute**

PA Core Standards:
CC.2.4.HS.B.1: Summarize, represent, and interpret data on a single count or measurement variable.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.4.HSB1a	

PA Core Standards:
CC.2.4.HS.B.2: Summarize, represent, and interpret data on two categorical and quantitative variables.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.4.HSB2a	**Interpret the means and/or medians of two sets of data**

PA Core Standards:
CC.2.4.HS.B.3: Analyze linear models to make interpretations based on the data.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.4.HSB3a	**Identify the relationship between two or more variables in a function**

PA Core Standards:
CC.2.4.HS.B.4: Recognize and evaluate random processes underlying statistical experiments.

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PA Core Standards:

CC.2.4.HS.B.5: Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.4.HSB5a	**Draw a conclusion about data presented in a two-way table representing a real-world problem**

PA Core Standards:

CC.2.4.HS.B.6: Use the concepts of independence and conditional probability to interpret data.

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PA Core Standards:

CC.2.4.HS.B.7: Apply the rules of probability to compute probabilities of compound events in a uniform probability model.

Alternate Eligible Content Code	ALTERNATE ELIGIBLE CONTENT
CC.2.4.HSB7a	**Identify the probability of events based on real-world examples of conditional probability**