2026+ Mathematics Summative Assessment Blueprint

2026+ WY-TOPP | Approved: September 19, 2024

Aligned to 2023 Wyoming Math Content & Performance Standards

Operational on WY-TOPP Test Beginning School Year 2025-26

WY-TOPP Grade 3-10 Math Blueprint Snapshot

% Range by Domain on the WY-TOPP Math Assessment

GRADE	OPERATIONS & ALGEBRAIC THINKING	NUMBER & OPERATIONS -BASE 10	NUMBER & OPERATIONS -FRACTIONS	MEASUREMENT & DATA	GEOMETRY
3	21-29%	7-14%	25-32%	21-25%	10-14%
4	6-13%	26-30%	26-33%	16-23%	10-13%
5	13-20%	26-33%	26-33%	10-13%	10-13%

GRADE	RATIO & PROPORTIONAL RELATIONSHIPS	THE NUMBER SYSTEM	EXPRESSIONS & EQUATIONS	FUNCTIONS	GEOMETRY	STATISTICS & PROBABILITY
6	6-10%	26-30%	30-37%	N/A	10-17%	10-17%
7	13-17%	6-13%	16-20%	N/A	23-30%	26-33%
8	N/A	10-13%	23-30%	13-20%	26-33%	13-17%

GRADE	NUMBER & QUANTITY	ALGEBRA	FUNCTIONS	STATISTICS & PROBABILITY	GEOMETRY
9	7-13%	37-43%	37-43%	7-13%	0%
10	10-13%	0%	0%	25-35%	55-63%

WY-TOPP Gr. 3 Math Blueprint

Operations and Algebraic Thinking [21-29%]

3.OA.7 Fluently multiply and divide with factors from 1 to 10 using mental strategies. By end of Grade 3, know automatically all products of one-digit factors based on strategies.

3.OA.8 Solve two-step word problems (limited to the whole number system) using the four basic operations. Students should apply the Order of Operations when there are no parentheses to specify a particular order.

3.OA.8a Represent these problems using equations with a symbol standing for the unknown quantity.

3.OA.8b Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Number and Operations in Base Ten [7-14%]

3.NBT.2 Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of addition, and/or the relationship between addition and subtraction.

Number and Operations - Fractions [25-32%]

3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.

3.NF.2 Understand and represent fractions on a number line diagram.

3.NF.2a Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.

3.NF.2b Represent a fraction a/b on a number line diagram by marking off *a* lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.

3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

3.NF.3a Understand two fractions as equivalent if they are the same size, or the same point on a number line.

3.NF.3b Recognize and generate simple equivalent fractions. Explain why the fractions are equivalent.

3.NF.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.

3.NF.3d Compare two fractions with the same numerator or the same denominator, by reasoning about their size. Recognize that valid comparisons rely on the two fractions referring to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions.

Measurement and Data [21-25%]

3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Use the data to create a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

3.MD.7 Relate area to the operations of multiplication and addition.

3.MD.7a Find the area of a rectangle with whole-number side lengths (dimensions) by multiplying them. Show that this area is the same as when counting unit squares.

3.MD.7b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

3.MD.7c Use area models to represent the Distributive Property in mathematical reasoning. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c.

Geometry [10-14%]

3.G.1 Use attributes of quadrilaterals to classify rhombuses, rectangles, and squares. Understand that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

WY-TOPP Gr. 4 Math Blueprint

Operations and Algebraic Thinking [6-13%]

- **4.OA.3** Solve multi-step word problems posed with whole numbers, including problems in which remainders must be interpreted.
  - **4.OA.3a** Represent these problems using equations with a letter standing for the unknown quantity.
  - **4.OA.3b** Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Number and Operations in Base Ten [26-30%]

- **4.NBT.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.
- **4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.5** Use strategies based on place value and the properties of multiplication to:
  - **4.NBT.5a** Multiply a whole number of up to four digits by a one-digit whole number.
  - **4.NBT.5b** Multiply a pair of two-digit numbers.
  - **4.NBT.5c** Use appropriate models to explain the calculation, such as by using equations, rectangular arrays, and/or area models.
- **4.NBT.6** Use strategies based on place value, the properties of multiplication, and/or the relationship between multiplication and division to find quotients and remainders with up to four-digit dividends and one-digit divisors. Use appropriate models to explain the calculation, such as by using equations, rectangular arrays, and/or area models.

Number and Operations - Fractions [26-33%]

- **4.NF.1** Explain why a fraction a/b is equivalent to a fraction $n \times a/n \times b$ 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.
- **4.NF.2** Compare two fractions with different numerators and different denominators by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$.
  - **4.NF.2a** Recognize that comparisons are valid only when the two fractions refer to the same whole.
  - **4.NF.2b** Record the results of comparisons with symbols >, =, or <.
  - **4.NF.2c** Justify the conclusions by using a visual fraction model.
- **4.NF.3** Understand a fraction a/b with a > 1 as a sum of unit fractions ($1/b$).
  - **4.NF.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
  - **4.NF.3b** Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by using a visual fraction model.
  - **4.NF.3c** Add and subtract mixed numbers with like denominators by replacing each mixed number with an equivalent fraction, and/or by using properties of addition and the relationship between addition and subtraction.
  - **4.NF.3d** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

4.NF.7 Compare and order decimal numbers to hundredths and justify by using concrete and visual models. Record the results of comparisons with the words "is greater than," "is equal to," "is less than," and with the symbols >, =, and <.

Measurement and Data [16-23%]

4.MD.3 Apply the area and perimeter formulas for rectangles in real-world and mathematical problems.

4.MD.7 Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems.

Geometry [10-13%]

4.G.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 triangles.

WY-TOPP Gr. 5 Math Blueprint

Operations and Algebraic Thinking [13-20%]

5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

5.OA.2 Write simple expressions requiring parentheses that record calculations with numbers, and interpret numerical expressions without evaluating them.

Number and Operations in Base Ten [26-33%]

5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $1/10$ of what it represents in the place to its left.

5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10.

5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths using concrete models or drawings, and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Number and Operations - Fractions [26-33%]

5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers by using visual fraction models or equations to represent the problem.

5.NF.6 Solve real-world problems involving multiplication of fractions and mixed numbers by using visual fraction models or equations to represent the problem.

5.NF.7 Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations.

5.NF.7a Interpret division of a unit fraction by a non-zero whole number and compute the quotient.

5.NF.7b Interpret division of a whole number by a unit fraction and compute the quotient.

5.NF.7c Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions by using visual fraction models and equations to represent the problem.

Measurement and Data [10-13%]

5.MD.5 Relate volume to the operations of multiplication and solve real-world and mathematical problems involving volume.

5.MD.5a Find the volume of a right rectangular prism with whole number dimensions by multiplying them. Show that this volume is the same as when counting unit cubes.

5.MD.5b Find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems given the formulas V=(l)(w)(h) and V=(B)(h) for rectangular prisms.

Geometry [10-13%]

5.G.2 Plot and interpret points in the first quadrant of the coordinate plane to represent real-world and mathematical situations.

WY-TOPP Gr. 6 Math Blueprint

Ratios and Proportional Relationships [6-10% on Non-Calculator Section]

6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems.

6.RP.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

6.RP.3b Solve unit rate problems including those involving unit pricing and constant speed.

6.RP.3c Understand that a percentage is a rate per 100 and use this to solve problems involving wholes, parts, and percentages.

6.RP.3d Use ratio reasoning to convert measurement units; convert units appropriately when multiplying or dividing quantities.

The Number System [26-30% on Non-Calculator Section]

6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions by using visual fraction models and equations to represent the problem.

6.NS.3 Add, subtract, multiply, and divide manageable multi-digit decimals using efficient and generalizable procedures including, but not limited to, the standard algorithm for each operation.

6.NS.7 Understand ordering and absolute value of rational numbers.

6.NS.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.

6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts.

6.NS.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.

6.NS.7d Distinguish comparisons of absolute value from statements about order.

6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Find distances between points with the same first coordinate or the same second coordinate; relate absolute value and distance.

Expressions and Equations [30-37% on Non-Calculator Section]

6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers.

6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers.

6.EE.2b Identify parts of an expression using mathematical terms (sum, difference, term, product, factor, quotient, coefficient, constant).

6.EE.2c Use Order of Operations to evaluate algebraic expressions using positive rational numbers and whole-number exponents. Include expressions that arise from formulas in real-world problems.

6.EE.3 Apply the properties of operations to generate equivalent expressions.

6.EE.6 Use variables to represent unknown numbers and write expressions when solving a real-world or mathematical problem.

6.EE.7 Write and solve real-world and mathematical problems in the form of one-step, linear equations involving non negative rational numbers.

6.EE.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

Geometry [10-17% on Calculator Section]

6.G.1 Find area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures in the context of solving real-world and mathematical problems.

Statistics and Probability [10-17% on Calculator Section]

6.SP.4 Display numerical data in plots on a number line, including dot plots, stem-and-leaf plots, histograms, and box plots.

6.SP.5 Summarize numerical data sets in relation to their real-world context.

6.SP.5a Report the sample size.

6.SP.5b Describe the context of the data under investigation, including how it was measured and its units of measurement.

6.SP.5c Find quantitative measures of center (median, mode and mean) and variability (range and interquartile range). Describe any overall pattern (including outliers, clusters, and distribution), with reference to the context in which the data was gathered.

6.SP.5d Justify the choice of measures of center (median, mode, or mean) based on the shape of the data distribution and the context in which the data was gathered.

WY-TOPP Gr. 7 Math Blueprint

Ratios and Proportional Relationships [13-17%]

7.RP.2 Recognize and represent proportional relationships between quantities.

7.RP.2a Decide whether two quantities in a table or graph are in a proportional relationship.

7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

7.RP.2c Represent proportional relationships with equations.

7.RP.2d Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.

7.RP.3 Solve multi-step real-world and mathematical problems involving ratios and percentages.

The Number System [6-13%]

7.NS.3 Solve real-world and mathematical problems involving the four arithmetic operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)

Expressions and Equations [16-20%]

7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

7.EE.4 Apply the concepts of linear equations and inequalities in one variable to real-world and mathematical situations.

7.EE.4a Write and fluently solve linear equations of the form $ax + b = c$ and $a(x + b) = c$ where a, b, and c are rational numbers.

7.EE.4b Write and solve multi-step linear equations that include the use of the Distributive Property and combining like terms. Exclude equations that contain variables on both sides.

7.EE.4c Write and solve two-step linear inequalities. Graph the solution set on a number line and interpret its meaning.

7.EE.4d Identify and justify the steps for solving multi-step linear equations and two-step linear inequalities.

Geometry [23-30%]

7.G.4 Investigate the concept of circles.

7.G.4a Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle.

7.G.4b Understand that π is defined by the constant of proportionality between the circumference and diameter.

7.G.4c Given the formulas for circumference and area of circles, solve real-world and mathematical problems.

7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

7.G.6 Solve real-world and mathematical problems involving:

7.G.6a Area and surface area of objects composed of triangles and quadrilaterals;

7.G.6b Volume of objects composed only of right prisms having triangular or quadrilateral bases.

Statistics and Probability [26-33%]

7.SP.1 Solve real-world and mathematical problems involving:

7.SP.1a Understand that a sample is a subset of a population.

7.SP.1b Differentiate between random and non-random sampling.

7.SP.1c Understand that generalizations from a sample are valid only if the sample is representative of the population.

7.SP.1d Understand that random sampling is used to gather a representative sample and tends to support valid inferences about the population.

7.SP.4 Given measures of center and variability (mean, median and/or mode; range, interquartile range, and/or standard deviation), for numerical data from random samples, draw appropriate informal comparative inferences about two populations.

7.SP.5 Find and interpret the probability of a random event. Understand that the probability of a random event is a number between, and including, 0 and 1 that expresses the likelihood of the event occurring.

7.SP.6 Collect multiple samples to compare the relationship between theoretical and experimental probabilities for simple events.

WY-TOPP Gr. 8 Math Blueprint

The Number System [10-13%]

8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. Explore the real number system and its appropriate usage in real-world situations.

8.NS.1a Make comparisons between rational and irrational numbers.

8.NS.1b Understand that all real numbers have a decimal expansion.

8.NS.1c Model the hierarchy of the real number system, including natural, whole, integer, rational, and irrational numbers.

8.NS.1d Convert repeating decimals to fractions.

Expressions and Equations [23-30%]

8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

8.EE.7 Extend concepts of linear equations and inequalities in one variable to more complex multi-step equations and inequalities in real-world and mathematical situations.

8.EE.7a Solve linear equations and inequalities with rational number coefficients that include the use of the Distributive Property, combining like terms, and variable terms on both sides.

8.EE.7b Recognize the three types of solutions to linear equations: one solution, infinitely many solutions, or no solutions.

8.EE.8 Analyze and solve pairs of simultaneous linear equations.

8.EE.8a Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

8.EE.8b Solve systems of two linear equations in two variables with integer solutions by graphing the equations.

8.EE.8c Solve simple real-world and mathematical problems leading to two linear equations in two variables given y = mx + b form with integer solutions.

Functions [13-20%]

8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

8.F.4 Apply the concepts of linear functions to real-world and mathematical situations.

8.F.4a Understand that the slope is the constant rate of change and the y-intercept is the point where x = 0.

8.F.4b Determine the slope and the y-intercept of a linear function given multiple representations, including two points, tables, graphs, equations, and verbal descriptions.

8.F.4c Construct a function in slope-intercept form that models a linear relationship between two quantities.

8.F.4d Interpret the meaning of the slope and the y-intercept of a linear function in the context of the situation.

Geometry [26-33%]

8.G.2 Recognize through visual comparison that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems.

8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Statistics and Probability [13-17%]

8.SP.3 Use an equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table.

8.SP.4a Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects.

8.SP.4b Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

WY-TOPP Gr. 9 Math Blueprint

Number and Quantity [7-13%]

N.RN.1 Explain how the meaning of the definition of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

Algebra [37-43%]

A.SSE.3 Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

A.SSE.3a Factor a quadratic expression to reveal the zeros of the function it defines.

A.APR.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.

A.CED.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.

A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A.REI.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

A.REI.6 Estimate solutions graphically and determine algebraic solutions to linear systems, focusing on pairs of linear equations in two variables.

Functions [37-43%]

F.IF.1 Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. The graph of f is the graph of the equation y = f(x).

F.IF.2 Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

F.IF.7a Graph linear and quadratic functions and show intercepts, maxima, and minima.

F.BF.1 Write a function that describes a relationship between two quantities.

F.BF.1a Determine an explicit expression, a recursive process, or steps for calculation from a context.

F.LE.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.

F.LE.1a Verify that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.

F.LE.1b Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.

F.LE.1c Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

F.LE.2 Construct linear and exponential functions using a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

Statistics and Probability [7-13%]

S.ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

WY-TOPP Gr. 10 Math Blueprint

Number and Quantity [10-13%]

N.Q.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; and choose and interpret the scale and the origin in graphs and data displays.

Geometry [55-63%]

G.CO.3 Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.

G.CO.8 Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

G.CO.9 Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.

G.CO.10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180 degrees; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.

G.SRT.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

G.SRT.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

G.GPE.5 Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).

G.GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.

Statistics and Probability [25-35%]

S.ID.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

S.ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

S.ID.6a Use a function to describe data trends to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.

S.ID.9 Distinguish between correlation and causation.