Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**CO**) Congruence Standard 1	Experiment with transformations in the plane.	Know precise definitions of angle, circle, perpendicular line, parallel line, or line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	***G-CO.1 Identify Definitions*** <STUDENT> will identify definitions of angle, circle, perpendicular line, parallel line, or line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 2	Experiment with transformations in the plane.	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).	***G-CO.2 Describe Transformations as Functions*** <STUDENT> will describe transformations as functions that take points in the plane as inputs and give other points as outputs <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy. ***G-CO.2 Compare Transformations*** <STUDENT> will compare transformations that preserve distance and angle to those that do not <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 3	Experiment with transformations in the plane.	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	***G-CO.3 Describe Rotations and Reflections*** When given a rectangle, parallelogram, or trapezoid, or regular polygon <STUDENT> will describe its rotations and/or reflections <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 4	Experiment with transformations in the plane.	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	***G-CO.4 Definitions of Rotations, Reflections, Transformations*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings the definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**CO**) Congruence Standard 5	Experiment with transformations in the plane.	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.	***G-CO.5 Draw Transformed Figures*** When given a geometric figure and a rotation, reflection, or translation, <STUDENT> will draw the transformed figure using graph paper and explain orally, in writing, and/or through a combination of words and drawings if a sequence of transformations will translate a given figure onto another <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 6	Understand congruence in terms of rigid motions.	Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	***G-CO.6 Predict Effect of Given Rigid Motion*** <STUDENT> will use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy. ***G.CO.6 Rigid Motion (2 Figures)- Congruence*** When given two figures, <STUDENT> will use the definition of congruence in terms of rigid motions to explain if they are congruent orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 8	Understand congruence in terms of rigid motions.	Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	***G-CO.8 Explain Criteria for Triangle Congruence*** <STUDENT> will explain orally, in writing, or through a combination of words and drawings how the criteria for triangle congruence (ASA, SAS, and SSS) are used to prove the attributes of a triangle <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**CO**) Congruence Standard 9	Prove geometric theorems.	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.9 Prove Theorems-Lines & Angles*** <STUDENT> will prove theorems about lines and angles orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 10	Prove geometric theorems.	Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; 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-CO.10 Prove Theorems-Triangles*** <STUDENT> will prove theorems about triangles orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CO**) Congruence Standard 11	Prove geometric theorems.	Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.	***G-CO.11 Prove Theorems- Parallelograms*** <STUDENT> will prove theorems about parallelograms orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 1	Understand similarity in terms of similarity transformations.	Verify experimentally the properties of dilations given by a center and a scale factor: 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. b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	***G-SRT.1 Verify Properties of Dilations*** <STUDENT> will explain the properties of dilations orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 2	Understand similarity in terms of similarity transformations.	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.	***G-SRT.2 Definition of Similarity*** When given two figures, <STUDENT> will use the definition of similarity to explain orally, in writing, and/or through a combination of words and drawings if two transformations of figures are similar and/or proportional <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 3	Understand similarity in terms of similarity transformations.	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	***G-SRT.3 Establish AA Criterion for Triangles to be Similar*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings how the properties of similarity transformations establish the AA criterion for two triangles to be similar <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 4	Prove theorems involving similarity.	Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.	***G.SRT.4 Prove Theorems about Triangles*** <STUDENT> will prove theorems orally, in writing, and/or through a combination of words and drawings about similar triangles <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy. ***G-SRT.4 Use Pythagorean Theorem*** <STUDENT> will use the Pythagorean Theorem to prove triangle similarity <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 5	Prove theorems involving similarity.	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	***G-SRT.5 Congruence and Similarity, Triangles*** <STUDENT> will use congruence and similarity criteria for triangles to solve problems <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 6	Define trigonometric ratios and solve problems involving right triangles.	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	***G-SRT.6 Side Ratios in Right Triangles*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings that by similarity, side ratios in right triangles are properties of the angles in the triangle <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 7	Define trigonometric ratios and solve problems involving right triangles.	Explain and use the relationship between the sine and cosine of complementary angles.	***G-SRT.7 Sine and Cosine of Complementary Angles*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings the relationship between the sine and cosine of complementary angles <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**SRT**) Similarity, Right Triangles, and Trigonometry Standard 8	Define trigonometric ratios and solve problems involving right triangles.	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems	***G-SRT.8 Pythagorean Theorem and Trigonometric Ratios*** <STUDENT> will use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**C**) Circles Standard 1	Understand and apply theorems about circles.	Prove that all circles are similar.	***G-C.1 Prove all Circles are Similar*** <STUDENT> will prove orally, in writing, and/or through a combination of words and drawings that all circles are similar <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**C**) Circles Standard 2	Understand and apply theorems about circles.	Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.	***G-C.2 Central, Inscribed, Circumscribed Angles in Circles*** <STUDENT> will identify and explain relationships among inscribed angles, radii, and chords, including the relationship between central, inscribed, and circumscribed angles <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**C**) Circles Standard 3	Understand and apply theorems about circles.	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	***G-C.3 Prove Inscribed and Circumscribed Circles of a Triangle*** <STUDENT> will prove that properties of angles for a quadrilateral inscribes in a circle orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
			G-C.3 Prove Inscribed and Circumscribed Circles of a Triangle <STUDENT> will prove that properties of angles for a quadrilateral inscribes in a circle orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**C**) Circles Standard 5	Find arc lengths and areas of sectors of circles.	Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.	***G-C.5 Length of an Arc*** <STUDENT> will prove, using similarities, that the length of an arc intercepted by an angle is proportional to the radius <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
			G-C.5 Area of a Sector <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings the formula for the area of a sector and/or convert between degrees and radians <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**GPE**) Expressing Geometric Properties with Equations Standard 1	Translate between the geometric description and the equation for a conic section.	Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	***G-GPE.1 Circle- Pythagorean Theorem*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings the equation of a circle of given center and radius using the Pythagorean Theorem <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**GPE**) Expressing Geometric Properties with Equations Standard 2	Translate between the geometric description and the equation for a conic section.	Derive the equation of a parabola given a focus and directrix.	***G-GPE.2 Equation of a Parabola*** <STUDENT> will explain orally and/or in writing the equation of a parabola <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**GPE**) Expressing Geometric Properties with Equations Standard 4	Use coordinates to prove simple geometric theorems algebraically.	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1,√3) lies on the circle centered at the origin and containing the point (0, 2).	***G-GPE.4 Use Coordinates to Prove Theorems*** <STUDENT> will use coordinates to prove orally and/or in writing simple geometric theorems using algebraic terms <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**GPE**) Expressing Geometric Properties with Equations Standard 5	Use coordinates to prove simple geometric theorems algebraically.	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-GPE.5 Slope Criteria for Parallel & Perpendicular Lines*** <STUDENT> will prove orally, in writing, and/or through a combination of words and drawings the slope criteria for parallel and perpendicular lines and/or use the slope criteria for parallel and perpendicular lines to solve geometric problems <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**GPE**) Expressing Geometric Properties with Equations Standard 6	Use coordinates to prove simple geometric theorems algebraically.	Find the point on a directed line segment between two given points that partitions the segment in a given ratio.	***G-GPE.6 Partition Line Segment in a Given Ratio*** <STUDENT> will solve for the point on a directed line segment between two given points that partitions the segment in a given ratio <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**GPE**) Expressing Geometric Properties with Equations Standard 7	Use coordinates to prove simple geometric theorems algebraically.	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.	***G-GPE.7 Compute Perimeters/Areas of Polygons*** <STUDENT> will use coordinates to solve for the perimeters of polygons and/or areas of triangles and rectangles <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**GMD**) Geometric Measurement and Dimension Standard 1	Explain volume formulas and use them to solve problems.	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.	***G-GMD.1 Explain Formulas for Circumference, Area, Volume*** <STUDENT> will explain the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, or cone orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**GMD**) Geometric Measurement and Dimension Standard 3	Explain volume formulas and use them to solve problems.	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.	***G-GMD.3 Use Volume Formulas*** <STUDENT> will use volume formulas for cylinders, pyramids, cones or spheres to solve problems <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**MG**) Modeling with Geometry Standard 1	Apply geometric concepts in modeling situations.	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder.	***G-MG.1 Describe Objects by Shape, Measure, Properties*** <STUDENT> will use geometric shapes, their measures, and their properties to describe objects orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**MG**) Modeling with Geometry Standard 2	Apply geometric concepts in modeling situations.	Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).	***G-MG.2 Density Based on Area & Volume*** <STUDENT> will explain concepts of density based on area and volume in modeling situations orally, in writing, and/or through a combination of words and drawings <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.

Geometry Course			
Domain	**Cluster**	**Standard**	**Associated Goal Stems**
(**CP**) Conditional Probability and the Rules of Probability Standard 2	Understand independence and conditional probability and use them to interpret data.	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	***S-CP.2 Probability of Independent Events*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings that two events are independent if the probability of them occurring together is the product of their probabilities <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CP**) Conditional Probability and the Rules of Probability Standard 4	Understand independence and conditional probability and use them to interpret data.	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of STUDENTs in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected STUDENT from your school will favor science given that the STUDENT is in tenth grade. Do the same for other subjects and compare the results.	***S-CP.4 Explain Two Way Frequency Tables of Data*** <STUDENT> will construct and explain orally and/or in writing two-way frequency tables of data when two categories are associated with each object being classified <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CP**) Conditional Probability and the Rules of Probability Standard 8	Use the rules of probability to compute probabilities of compound events in a uniform probability model.	Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P (B)P(A|B), and interpret the answer in terms of the model.	***S-CP.8 Demonstrate the Multiplication Rule*** <STUDENT> will explain orally, in writing, and/or through a combination of words and drawings the general multiplication rule in a uniform probability model <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.
(**CP**) Conditional Probability and the Rules of Probability Standard 9	Use the rules of probability to compute probabilities of compound events in a uniform probability model.	Use permutations and combinations to compute probabilities of compound events and solve problems.	***S-CP.9 Use Permutations and Combinations*** <STUDENT> will use permutations and combinations to solve for probabilities of compound events <UNDER_WHAT_CONDITION> as measured <MEASURE> in <NUMBER1> out of <NUMBER2> trials with <PERCENT>% accuracy.