

2022-2023

Formal Geometry Course Guide

#2215/2216 Formal Geometry

Formal Geometry Pacing

Chapter - Topic	Days	Chapter - Topic	Days
1 - Tools of Geometry	12	6 - Quadrilaterals	10
		7 - Similarity	13
2 - Logical Arguments and Line Relationships	22	8 - Right Triangles and Trigonometry	12
		9 - Circles	11
Be here by Fall Break		Be here by Spring Break	
3 - Rigid Transformations and Symmetry	10	10 - Extending Area	13
4 - Triangles and Congruence	15	11 - Extending Volume	10
5 - Relationships in Triangles	13	12 - Probability (Formal)	12
Be here by end of Semester One		Be here by end of Semester Two	

Formal Geometry

Tools of Geometry – Ch. 1			
Geometry begins w/Chapter 1 - *Only use Ch. 0 in remediation*			
Lesson	Resource	Extension	Days
Get Ready for Chapter 1 – Concept Check, Review/New Vocabulary	TE p4		1
Points Lines and Planes (HSG.CO.1)	1.1	TE p5B	1.5
Line Segments and Distance (HSG.CO.1, HSG.CO.12)	1.2	TE p14B	2
Locating Points and Midpoints (HSG.CO.1, HSG.CO.12)	1.3	TE p26B	2
Angle Measure (HSG.CO.1, HSG.CO.12)	1.4	TE p36B	1
Angle Relationships (HSG.CO.1, HSG.CO.12)	1.5	TE p46B	2.5
Review and Test			2
			Total = 12

Experiment with transformations in the plane.	
*HSG.CO.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.

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Logical Arguments and Line Relationships – Ch. 2			
Lesson	Resource	Extension	Days
Chapter 2 – Part 1			
Conjectures and Counterexamples	2.1 (Formal)	TE p111B	1
Statements, Conditionals and BiConditionals	2.2 (Formal)	TE p119B	1
Deductive Reasoning (HSG.CO.9)	2.3	TE p131B	1
Writing Proofs (HSG.CO.9, HSG.MG.3) – <i>Formal Geometry students should be able to write proofs of any size.</i>	2.4	TE p140B	5 (Frml)
Proving Segment Relationships (HSG.CO.9, HSG.CO.12)	2.5	TE p152B	2
Proving Angle Relationships (HSG.CO.9, HSG.CO.12)	2.6	TE p159B	2
Review and Test			2
Chapter 2 – Part 2			
Parallel Lines and Transversals (HSG.CO.1, HSG.CO.9)	2.7	TE p111B	2
Slope and Equations of Lines (HSG.GPE.5)	2.8	TE p168B	1
Proving Lines Parallel (HSG.CO.9, HSG.CO.12)	2.9	TE p177B	2
Perpendiculars and Distance (HSG.CO.12, HSG.MG.3)	2.10	TE p186B	1
Review and Test			2
Be here by Fall Break			Total = 22

Experiment with transformations in the plane.	
*HSG.CO.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
Prove geometric theorems.	
*HSG.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.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Use coordinates to prove simple geometric theorems algebraically.	
HSG.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).
Apply geometric concepts in modeling situations.	
HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

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Rigid Transformations and Symmetry – Ch. 3			
Lesson	Resource	Extension	Days
Get Ready for Chapter 3 – Concept Check, Review/New Vocabulary	TE p218		1
Reflections (HSG.CO.3, HSG.CO.4, HSG.CO.5)	3.1	TE p219B	1
Translations (HSG.CO.3, HSG.CO.4, HSG.CO.5, HSG.CO.6)	3.2	TE p230B	1
Rotations (rotations at origin & about a point) (HSG.CO.4, HSG.CO.5, HSG.CO.6)	3.3	TE p239B	1
Compositions of Transformations (HSG.CO.2, HSG.CO.5)	3.4	TE p248B	2
Symmetry (HSG.CO.3)	3.5	TE p259B	2
	Review and Test		2
			Total = 10

Experiment with transformations in the plane.	
HSG.CO.2	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).
HSG.CO.3	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
HSG.CO.4	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
*HSG.CO.5	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 on to another.
Understand congruence in terms of rigid transformations.	
*HSG.CO.6	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.

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Triangles and Congruence - Ch. 4

Lesson	Resource	Extension	Days
Get Ready for Chapter 4 – Concept Check, Review/New Vocabulary	TE p280		1
Angles of Triangles (HSG.CO.10)	4.1	TE p281B	2
Congruent Triangles (HSG.CO.7, HSG.CO.10, HSG.SRT.5)	4.2	TE p291B	2
Proving Triangles Congruent – SSS, SAS (HSG.CO.8, HSG.CO.10, HSG.CO.12, HSG.SRT.5)	4.3	TE p300B	2
Proving Triangles Congruent – ASA, AAS (HSG.CO.8, HSG.CO.12, HSG.SRT.5)	4.4	TE p311B	2
Proving Right Triangles Congruent (HSG.CO.10, HSG.SRT.5)	4.5	TE p319B	1
Isosceles and Equilateral Triangles (HSG.CO.10, HSG.CO.12)	4.6	TE p325B	1
Triangles and Coordinate Proof (HSG.CO.10, HSG.GPE.4)	4.7	TE p334B	1
Review and Test			3
			Total = 15

Understand congruence in terms of rigid motions.	
*HSG.CO.7	Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
*HSG.CO.8	Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.
Prove geometric theorems.	
*HSG.CO.10	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.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Use coordinates to prove simple geometric theorems algebraically.	
HSG.GPE.4	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.
Prove theorems involving similarity.	
*HSG.SRT.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

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Relationships in Triangles - Ch. 5			
Lesson	Resource	Extension	Days
Get Ready for Chapter 5 - Concept Check, Review/New Vocabulary	TE p352		1
Bisectors of Triangles (HSG.CO.9, HSG.CO.10, HSG.CO.12, HSG.MG.3)	5.1	TE p353B	2
Medians & Altitudes of Triangles (HSG.CO.10, HSG.CO.12, HSG.MG.3) **[No emphasis on points of concurrency]**	5.2	TE p364B	2
Inequalities in One Triangle (HSG.CO.10)	5.3	TE p374B	1
Indirect Proof (HSG.CO.10)	5.4 (Formal)	TE p383B	1
The Triangle Inequality (HSG.CO.10, HSG.CO.12, HSG.MG.3)	5.5	TE p393B	2
Inequalities in Two Triangles (HSG.CO.10)	5.6 (Formal)	TE p401B	2
Review and Test			2
Be Here by end of Semester One			Total = 13

Prove geometric theorems.	
*HSG.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.
*HSG.CO.10	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.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Apply geometric concepts in modeling situations.	
HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

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Quadrilaterals - Ch. 6

Lesson	Resource	Extension	Days
Get Ready for Chapter 6 – Concept Check, Review/New Vocabulary	TE p422		1
Angles of Polygons (HSG.MG.1)	6.1	TE p423B	1
Parallelogram (HSG.CO.11, HSG.GPE.4)	6.2	TE p433B	1
Tests of Parallelograms (HSG.CO.11, HSG.CO.12, HSG.GPE.4, HSG.GPE.5)	6.3	TE p442B	2
Special Parallelograms: Rectangles (HSG.CO.11, HSG.CO.12, HSG.GPE.4)	6.4	TE p453B	1
Special Parallelograms: Rhombi, Squares (HSG.CO.11, HSG.CO.12, HSG.GPE.4)	6.5	TE p460B	1
Trapezoids and Kites (HSG.MG.3, HSG.GPE.4)	6.6	TE p469B	1
Review and Test			2
			Total = 10

Prove geometric theorems.	
*HSG.CO.11	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.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Use coordinates to prove simple geometric theorems algebraically.	
HSG.GPE.4	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that figure defined by four given points in the coordinate plane is a rectangle.
HSG.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).
Apply geometric concepts in modeling situations.	
*HSG.MG.1	Use geometric shapes, their measures, and their properties to describe objects.
*HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

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Similarity - Ch. 7			
Lesson	Resource	Extension	Days
Get Ready for Chapter 7 – Concept Check, Review/New Vocabulary	TE p490		1
Dilations (HSG.CO.2, HSG.SRT.1)	7.1	TE p491B	2
Similar Polygons (HSG.SRT.2)	7.2	TE p502B	1
Similar Triangles AA Similarity (HSG.SRT.2, HSG.SRT.3, HSG.SRT.5)	7.3	TE p511B	1
Similar Triangles SSS and SAS Similarity (HSG.SRT.2, HSG.SRT.4, HSG.SRT.5)	7.4	TE p521B	1
Parallel Lines and Proportional Parts (HSG.CO.12, HSG.SRT.4, HSG.SRT.5)	7.5	TE p534B	2
Parts of Similar Triangles (HSG.SRT.4, HSG.SRT.5)	7.6	TE p544B	2
Review and Test			3
			Total = 13

Experiment with transformations in the plane.	
HSG.CO.2	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).
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Understand similarity in terms of similarity transformations.	
*HSG.SRT.1	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.
*HSG.SRT.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 proportionality of all corresponding pairs of sides.
*HSG.SRT.3	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.
Prove theorems involving similarity.	
*HSG.SRT.4	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.
*HSG.SRT.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

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Right Triangles and Trigonometry - Ch. 8

Lesson	Resource	Extension	Days
Get Ready for Chapter 8 - Concept Check, Review/New Vocabulary Supplement Rationalizing Denominator $\frac{3}{\sqrt{2}} = \frac{3\sqrt{2}}{2}$	TE p564		1
Geometric Mean (HSG.SRT.4, HSG.SRT.5)	8.1	TE p565B	1
The Pythagorean Theorem and Its Converse (HSG.CO.10, HSG.SRT.8, HSG.MG.3)	8.2	TE p574B	2
Special Right Triangles (HSG.SRT.6)	8.3	TE p586B	1
Trigonometry (HSG.SRT.6, HSG.SRT.7)	8.4	TE p595B	2
Angles of Elevation and Depression (HSG.SRT.8)	8.5	TE p608B	1
*The Law of Sines (HSG.SRT.10, HSG.SRT.11)	8.6 (Formal)	TE p616B	1
*The Law of Cosines (HSG.SRT.10, HSG.SRT.11)	8.7 (formal)	TE p624B	1
Review and Test			2
			Total = 12

Prove geometric theorems.	
*HSG.CO.10	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.
Apply geometric concepts in modeling situations.	
*HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).
Prove theorems involving similarity.	
*HSG.SRT.4	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.
*HSG.SRT.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
Define trigonometric ratios and solve problems involving right triangles.	
*HSG.SRT.6	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.
HSG.SRT.7	Explain and use the relationship between the sine and cosine of complementary angles.
*HSG.SRT.8	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.
HSG.SRT.10	Prove the Laws of Sines and Cosines and use them to solve problems.
HSG.SRT.11	Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

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Circles - Ch. 9			
Lesson	Resource	Extension	Days
Get Ready for Chapter 9 - Concept Check, Review/New Vocabulary	TE p642		1
Circles and Circumference (HSG.CO.1, HSG.MG.1)	9.1	TE p643B	1
Measuring Angles and Arcs (HSG.C.2, HSG.C.5)	9.2	TE p652B	1
Arcs and Chords (HSG.C.2, HSG.CO.12, HSG.MG.3)	9.3	TE p661B	1
Inscribed Angles (HSG.C.2, HSG.C.3, HSG.CO.13)	9.4	TE p669B	2
Tangents (HSG.C.2, HSG.C.4)	9.5	TE p678B	1
Secants, Tangents and Angle Measures (HSG.C.2)	9.6	TE p687B	1
Review and Test			3
Be here by Spring Break			Total = 11

Experiment with transformations in the plane.	
*HSG.CO.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
Make geometric constructions.	
HSG.CO.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
Make geometric constructions.	
HSG.CO.13	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.
Understand and apply theorems about circles.	
*HSG.C.2	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.
HSG.C.3	Construct the inscribed and circumscribed circles of a triangle and prove properties of angles for a quadrilateral inscribed in a circle.
HSG.C.4	(+) Construct a tangent line from a point outside a given circle to the circle.
*HSG.C.5	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.
Apply geometric concepts in modeling situations.	
*HSG.MG.1	Use geometric shapes, their measures, and their properties to describe objects.
HSG.MG.3	Apply geometric methods to solve design problems (designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

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Extending Area - Ch. 10

Lesson	Resource	Extension	Days
Get Ready for Chapter 10 – Concept Check, Review/New Vocabulary	TE p725		1
Areas of Parallelograms and Triangles (HSG.GPE.7, HSG.MG.1)	10.1	TE p725B	1
Areas of Trapezoids, Rhombi, and Kites (HSG.MG.3)	10.2	TE p733B	1
Areas of Circles and Sectors (HSG.C.5, HSG.GMD.1)	10.3	TE p743B	2
Areas of Regular Polygons and Composite Figures (HSG.MG.3)	10.4	TE p751B	2
Area of Nonrigid Transformations (HSG.GMD.1, HSG.MG.1)	10.5	TE p763B	1
Surface Area (HSG.MG.1, HSG.MG.3)	10.6	TE p770B	2
Review and Test			3
			Total = 13

Understand and apply theorems about circles.	
*HSG.C.5	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.
Explain volume formulas and use them to solve problems.	
*HSG.GMD.1	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. <i>Use dissections arguments, Cavalieri's Principle, and informal limit arguments.</i>
Use coordinates to prove simple geometric theorems algebraically.	
*HSG.GPE.7	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.
Apply geometric concepts in modeling situations.	
*HSG.MG.1	Use geometric shapes, their measures, and their properties to describe objects.
*HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

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Extending Volume - Ch. 11			
Lesson	Resource	Extension	Days
Get Ready for Chapter 11 - Concept Check, Review/New Vocabulary	TE p794		1
Cross Sections and Solids of Revolution (HSG.GMD.4)	11.1	TE p795B	1
Volume of Prisms and Cylinders (HSG.GMD.1, HSG.GMD.3, HSG.MG.3)	11.2	TE p802B	1
Volumes of Pyramids and Cones (HSG.GMD.1, HSG.GMD.3)	11.3	TE p810B	2
Spheres (HSG.MG.3, HSG.GMD.3)	11.4	TE p818B	1
Volume of Nonrigid transformations (HSG.GMD.1)	11.6	TE p834B	1
Review and Test			3
			Total = 10

Explain volume formulas and use them to solve problems.	
*HSG.GMD.1	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 dissections arguments, Cavalieri's Principle, and informal limit arguments.
*HSG.GMD.3	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
Visualize relations between two-dimensional and three-dimensional objects.	
HSG.GMD.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.
Apply geometric concepts in modeling situations.	
*HSG.MG.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios

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Probability - Ch. 12 (Formal Geometry)			
Lesson	Resource	Study Guide & Intervention	Days
Representing Sample Spaces (HSS.CP.1)	12.1	TE p859B	1
Probability and Counting (HSS.CP.1)	12.2	TE p866B	1
Probability with Permutations and Combinations (HSS.CP.9)	12.3	TE p872B	1
Geometric Probability (HSS.MD.7)	12.4	TE p881B	1
Probability and the Multiplication Rule (HSS.CP.2, HSS.CP.8)	12.5	TE p889B	2
Probability and the Addition Rule (HSS.CP.1, HSS.CP.7)	12.6	TE p897B	2
Conditional Probability (HSS.CP.3, HSS.CP.5, HSS.CP.6)	12.7	TE p907B	2
Review and Test			2
Be here by end of Semester Two			Total = 12

Understand independence and conditional probability and use them to interpret data.	
HSS.CP.1	Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).
HSS.CP.2	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.
HSS.CP.3	Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.
HSS.CP.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
Use the rules of probability to compute probabilities of compound events in a uniform probability model.	
HSS.CP.6	Find the conditional probability of A given B as the fraction of B’s outcomes that also belong to A, and interpret the answer in terms of the model.
HSS.CP.7	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.
HSS.CP.8	(+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B A) = P(B)P(A B)$, and interpret the answer in terms of the model.
HSS.CP.9	Use permutations and combinations to compute probabilities of compound events and solve problems.
Use probability to evaluate outcomes of decisions.	
HSS.MD.7	(+) Analyze decisions and strategies using probability concepts.

