A Correlation of

Pearson Mathematics Geometry Common Core

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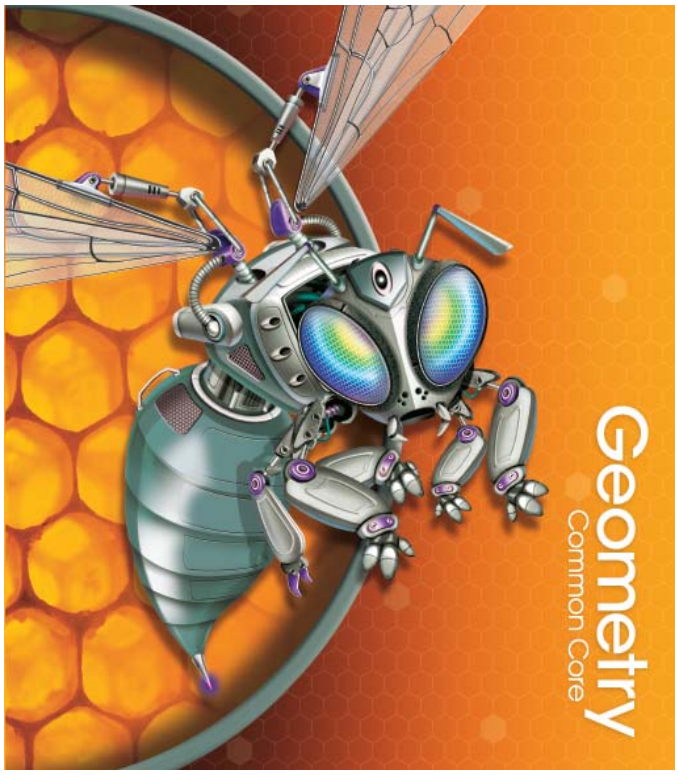

To the

MAISA CCSS Mathematics Curriculum

Geometry

Pearson

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To the MAISA CCSS Mathematics Curriculum - Geometry

Introduction

Pearson Algebra 1, Geometry, Algebra 2 Common Core Edition ©2015 balances conceptual understanding, procedural fluency, and the application of mathematics to solve problems and formulate models. The lesson design of the program was built specifically to meet the "rigor" criterion of the Common Core State Standards.

- Each lesson begins with **Interactive Learning**, the *Solve It!*, which immediately engages students in their daily learning according to the Standards for Mathematical Practice.

- The second step of the lesson, **Guided Instruction**, uses visual learning principles and a Thinking/Reasoning strand (seen in the *Know/Need/Plan* and *Think/Plan/Write* boxes) to introduce the Essential Understanding of the lesson by teaching THROUGH and FOR problem-solving. **Interactive Learning** and **Guided Instruction** are both deliberately designed to address the essential elements in the Common Core conceptual category of mathematical modeling.

- In the third step of the lesson, the **Lesson Check**, *Do you know HOW?* exercises measure students' procedural fluency, while *Do you UNDERSTAND?* problems measure students' conceptual understanding.

- In the fourth step of the lesson, **Practice** problems are designed to develop students' fluency in the Content Standards and proficiency with the Mathematical Practices. Real-world STEM problems as well as problems designed to elicit the use of one or more of the Standards for Mathematical Practice are clearly labeled in the **Practice** step of the lesson.

The final phase of the lesson, **Assess and Remediate,** features a Lesson Quiz to measure students' understanding of lesson concepts. By utilizing the balanced and proven-effective approach of Pearson's 5-step lesson design, you can teach the Common Core State Standards with confidence.

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(Continued) Unit 7 Modeling with 3- Dimensional Figures	Lesson 11-1: Space Figures and Cross Sections Lesson 11-2: Surface Areas of Prisms and Cylinders Lesson 11-3: Surface Areas of Pyramids and Cones Lesson 11-4: Volumes of Prisms and Cylinders Lesson 11-5: Volumes of Pyramids and Cones Lesson 11-6: Surface Areas and Volumes of Spheres Lesson 11-7: Areas and Volumes of Similar Solids Lesson 12-6: Locus: A Set of Points

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Unit 1 - Language of Geometry	
Content Expectations	
Geometry	
Congruence	
HSG-CO.D. Make geometric constructions	
HSG-CO.D.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.	**SE/TE: Concept Byte:** 42, 43-48, **Concept Byte:** 49, **Concept Byte:** 147, 182-188, 244-248, **Concept Byte:** 249, 285-291, **Concept Byte:** 413, **Concept Byte:** 470 **TE:** 48A-48B, 188A-188B, 248A-248B, 291A-291B
HSG-CO.D.13. Construct an equilateral triangle, a square and a regular hexagon inscribed in a circle.	**SE/TE:** 182-188, 250-256, 629-634 **TE:** 188A-188B, 256A-256B, 634A-634B
Expressing Geometric Properties with Equations	
HSG-GPE.B. Use coordinates to prove simple geometric theorems algebraically	
HSG-GPE.B.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).	**SE/TE:** 189-196, 197-204, 450-458, 460-467 **TE:** 196A-196B, 204A-204B, 458A-458B, 467A-467B
HSG-GPE.B.6. Find the point on a directed line segment between two given points that divide the segment in a given ratio.	**SE/TE:** 20-26, 50-56 **TE:** 26A-26B, 56A-56B
HSG-GPE.B.7. Use coordinates to compute perimeters of polygons and areas for triangles and rectangles, e.g. using the distance formula.	**SE/TE:** 50-56, 400-405, 616-622, **Concept Byte:** 667 **TE:** 56A-56B, 405A-405B, 622A-622B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Unit Level Standards	
Geometry	
Congruence	
HSG-CO.C. Prove geometric theorems	
HSG-CO.C.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; [use but save proving for later units] points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.	**SE/TE:** 120-127, 140-146, 148-155, 156-163, 292-299 **TE:** 127A-127B, 146A-146B, **Concept Byte:** 147, 155A-155B, 163A-163B, 299A-299B, **Concept Byte:** 308
Geometry	
Circles	
HSG-C.A. Understand and apply theorems about circles	
HSG-C.A.3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**SE/TE: Concept Byte:** 300, 301-307 **TE:** 307A-307B
Geometry	
Congruence	
HSG-CO.A. Experiment with transformations in the plane	
HSG-CO.A.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.	**SE/TE:** 4-10, 11-19, 20-26, 27-33, 34-40, 43-48, 140-146, 649-657 **TE:** 10A-10B, 19A-19B, 26A-26B, 33A-33B, 40A-40B, 48A-48B, 146A-146B, **Concept Byte:** 170, **Concept Byte:** 179-180, 657A-657B
Unit 2 - Transformational Geometry	
Content Expectations	
Geometry	
Congruence	
HSG-CO.A. Experiment with transformations in the plane	
HSG-CO.A.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.	**SE/TE:** 4-10, 11-19, 20-26, 27-33, 34-40, 43-48, 140-146, **Concept Byte:** 170, **Concept Byte:** 179-180, 649-657 **TE:** 10A-10B, 19A-19B, 26A-26B, 33A-33B, 40A-40B, 48A-48B, 146A-146B, 657A-657B

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HSG-CO.A.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).	**SE/TE: Concept Byte:** 544, 545-552, 554-560, 561-567, 570-576, 587-593 **TE:** 552A-552B, 560A-560B, 567A-567B, 576A-576B, 593A-593B
HSG-CO.A.3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	**SE/TE:** 554-560, 561-567, **Concept Byte:** 568-569 **TE:** 560A-560B, 567A-567B
HSG-CO.A.4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	**SE/TE:** 545-552, 554-560, 561-567 **TE:** 552A-552B, 560A-560B, 567A-567B
HSG-CO.A.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 onto another.	**SE/TE:** 545-552, **Concept Byte:** 553, 554-560, 561-567, 570-576 **TE:** 552A-552B, 560A-560B, 567A-567B, 576A-576B
HSG-CO.B. Understand congruence in terms of rigid motions	
HSG-CO.B.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.	**SE/TE:** 545-552, 554-560, 561-567, 570-576, 578-585 **TE:** 552A-552B, 560A-560B, 567A-567B, 576A-576B, 585A-585B
HSG-CO.D. Make geometric constructions	
HSG-CO.D.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.	**SE/TE: Concept Byte:** 42, 43-48, **Concept Byte:** 49, **Concept Byte:** 147, 182-188, 244-248, **Concept Byte:** 249, 285-291, **Concept Byte:** 413, **Concept Byte:** 470 **TE:** 48A-48B, 188A-188B, 248A-248B, 291A-291B

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Similarity, Right Triangles, & Trigonometry	
HSG-SRT.A. Understand similarity in terms of similarity transformations	
HSG-SRT.A.1. Verify experimentally the properties of dilations:	**SE/TE: Concept Byte:** 586, 587-593 **TE:** 593A-593B
HSG-SRT.A.1a. 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.	**SE/TE: Concept Byte:** 586, 587-593 **TE:** 593A-593B
HSG-SRT.A.1b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	**SE/TE: Concept Byte:** 586, 587-593 **TE:** 593A-593B
HSG-SRT.A.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 pairs of angles and the proportionality of all pairs of sides.	**SE/TE:** 594-600 **TE:** 600A-600B
Unit Level Standards	
Not Applicable	
Unit 3 – Triangles	
Content Expectations	
Algebra	
Arithmetic with Polynomials & Rational Functions	
HSA-APR.C. Use polynomial identities to solve problems.	
HSA-APR.C.4. Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 – y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.	This standard is addressed in Pearson Mathematics Algebra 2 Common Core. Please see: **SE/TE: Concept Byte:** 318
Geometry	
Congruence	
HSG-CO.B. Understand congruence in terms of rigid motions	
HSG-CO.B.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.	**SE/TE:** 545-552, 554-560, 561-567, 570-576, 578-585 **TE:** 552A-552B, 560A-560B, 567A-567B, 576A-576B, 585A-585B

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HSG-CO.B.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.	**SE/TE:** 578-585 **TE:** 585A-585B
HSG-CO.B.8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	**SE/TE:** 578-585 **TE:** 585A-585B
HSG-CO.C. Prove geometric theorems	
HSG-CO.C.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.	**SE/TE:** 171-178, 250-256, 285-291, 309-315, 317-322, 324-331, 332-339 **TE:** 178A-178B, 256A-256B, **Concept Byte:** 284, 291A-291B, 315A-315B, 322A-322B, 331A-331B, 339A-339B
Similarity, Right Triangles, & Trigonometry	
HSG-SRT.A. Understand similarity in terms of similarity transformations	
HSG-SRT.A.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 pairs of angles and the proportionality of all pairs of sides.	**SE/TE:** 594-600 **TE:** 600A-600B
HSG-SRT.A.3. Use the properties of similarity transformations to establish the AA criterion for similarity of triangles.	**SE/TE:** 594-600 **TE:** 600A-600B
HSG-SRT.B. Prove theorems involving similarity	
HSG-SRT.B.4. Prove theorems about triangles using similarity transformations. 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.	**SE/TE:** 471-478, 491-498 **TE:** 478A-478B, **Concept Byte:** 490, 498A-498B

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HSG-SRT.B.5. Use triangle congruence and similarity criteria to solve problems and to prove relationships in geometric figures. (	**SE/TE:** 218-224, 226-233, 234-241, 244-248, 250-256, 258-264, 265-271, 285-291, 292-299, 309-315, 353-358, 359-366, 367-374, 375-382, 383-388, 389-397, 432-438, 440-447, 450-458, 460-467 **TE:** 224A-224B, **Concept Byte:** 225, 233A-233B, 241A-241B, **Concept Byte:** 242-243, 248A-248B, 256A-256B, 264A-264B, 271A-271B, 291A-291B, 299A-299B, 315A-315B, **Concept Byte:** 352, 358A-358B, 366A-366B, 374A-374B, 382A-382B, 388A-388B, 397A-397B, 438A-438B, 447A-447B, **Concept Byte:** 448-449, 458A-458B, 467A-467B, **Concept Byte:** 468-469
Circles	
HSG-C.A. Understand and apply theorems about circles	
HSG-C.A.3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**SE/TE:** 301-307 **TE: Concept Byte:** 300, 307A-307B
Expressing Geometric Properties with Equations	
HSG-GPE.B. Use coordinates to prove simple geometric theorems algebraically	**SE/TE:** 414-418 **TE:** 418A-418B
HSG-GPE.B.4. 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).	**SE/TE:** 414-418 **TE:** 418A-418B
HSG-GPE.B.7. Use coordinates to compute perimeters of polygons and areas for triangles and rectangles, e.g. using the distance formula.	**SE/TE:** 50-56, 400-405, 616-622, **Concept Byte:** 667 **TE:** 56A-56B, 405A-405B, 622A-622B

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Modeling with Geometry	
HSG-MG.A. Apply geometric concepts in modeling situations	
HSG-MG.A.3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios).	**SE/TE:** 164-169 **TE:** 169A-169B
Unit Level Standards	
Not Applicable	
Unit 4 – Quadrilaterals	
Content Expectations	
Geometry	
Congruence	
HSG-CO.B. Understand congruence in terms of rigid motions	
HSG-CO.B.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.	**SE/TE:** 545-552, 554-560, 561-567, 570-576, 578-585 **TE:** 552A-552B, 560A-560B, 567A-567B, 576A-576B, 585A-585B
HSG-CO.C. Prove geometric theorems	
HSG-CO.C.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.	**SE/TE:** 359-366, 367-374, 375-382, 383-388 **TE:** 366A-366B, 374A-374B, 382A-382B, 388A-388B
HSG-CO.D. Make geometric constructions	
HSG-CO.D.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.	**SE/TE: Concept Byte:** 42, 43-48, **Concept Byte:** 49, **Concept Byte:** 147, 182-188, 244-248, **Concept Byte:** 249, 285-291, **Concept Byte:** 413, **Concept Byte:** 470 **TE:** 48A-48B, 188A-188B, 248A-248B, 291A-291B

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Expressing Geometric Properties with Equations	
HSG-GPE.B. Use coordinates to prove simple geometric theorems algebraically	
HSG-GPE.B.4. 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).	**SE/TE:** 414-418 **TE:** 418A-418B
Modeling with Geometry	
HSG-MG.A. Apply geometric concepts in modeling situations	
HSG-MG.A.1. Use geometric shapes, their measures and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).	**SE/TE:** 507-513, 616-622, 623-628, 629-634, 699-707, 708-715, 717-724, 726-732, 733-740, 742-749 **TE:** 513A-513B, 622A-622B, 628A-628B, 634A-634B, 707A-707B, 715A-715B, 724A-724B, 732A-732B, 740A-740B, 749A-749B
HSG-MG.A.3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios).	**SE/TE:** 164-169 **TE:** 169A-169B
Unit Level Standards	
Geometry	
Congruence	
HSG-CO.D. Make geometric constructions	
HSG-CO.D.13. Construct an equilateral triangle, a square and a regular hexagon inscribed in a circle.	**SE/TE: Concept Byte:** 667
HS: Geometry- Expressing Geometric Properties with Equations	
HSG-GPE.B. Use coordinates to prove simple geometric theorems algebraically	
HSG-GPE.B.7. Use coordinates to compute perimeters of polygons [quadrilaterals] and areas for triangles and rectangles [and other quadrilaterals], e.g. using the distance formula.	**SE/TE:** 400-405, **Concept Byte:** 614-615 **TE:** 405A-405B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Unit 5 - Right Triangle Trigonometry	
Content Expectations	
Functions	
Trigonometric Functions	
HSF-TF.A. Extend the domain of trigonometric functions using the unit circle.	
HSF-TF.A.3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for p/3, p/4 and p/6, and use the unit circle to express the values of sine, cosines, and tangent for x, p + x, and 2p – x in terms of their values for x, where x is any real number.	**SE/TE: Concept Byte:** 506
Geometry	
Similarity, Right Triangles, & Trigonometry	
HSG-SRT.C. Define trigonometric ratios and solve problems involving right triangles	
HSG-SRT.C.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.	**SE/TE: Concept Byte:** 506, 507-513 **TE:** 513A-513B
HSG-SRT.C.7. Explain and use the relationship between the sine and cosine of complementary angles.	**SE/TE:** 507-513, **Concept Byte:** 515 **TE:** 513A-513B
HSG-SRT.C.8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.	**SE/TE:** 491-498, 499-505, 507-513, **Concept Byte:** 515, 516-521 **TE:** 498A-498B, 505A-505B, 513A-513B, 521A-521B
HSG-SRT.D. Apply trigonometry to general triangles	
HSG-SRT.D.9. (+) Derive the formula A = ½ ab sin© for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.	**SE/TE:** 643-648 **TE:** 648A-648B
HSG-SRT.D.10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.	**SE/TE:** 522-526, 527-532 **TE:** 526A-526B, 532A-532B
HSG-SRT.D.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).	**SE/TE:** 522-526, 527-532 **TE:** 526A-526B, 532A-532B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Unit Level Standards	
Not Applicable	
Unit 6 – Circles	
Content Expectations	
Functions	
Trigonometric Functions	
HSF-TF.A. Extend the domain of trigonometric functions using the unit circle.	
HSF-TF.A.1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	**SE/TE: Concept Byte:** 658
Geometry	
Circles	
HSG-C.A. Understand and apply theorems about circles	
HSG-C.A.1. Prove that all circles are similar.	**SE/TE:** 649-657 **TE:** 657A-657B
HSG-C.A.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.	**SE/TE:** 649-657, **Concept Byte:** 658-659, 762-769, **Concept Byte:** 770, 771-779, 780-787, **Concept Byte:** 789, 790-797 **TE:** 657A-657B, 769A-769B, 779A-779B, 787A-787B, 797A-797B
HSG-C.A.3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**SE/TE: Concept Byte:** 300, 301-307 **TE:** 307A-307B
HSG-C.A.4. (+) Construct a tangent line from a point outside a given circle to the circle.	**SE/TE:** 780-783 **TE:** 787A-787B
HSG-C.B. Find arc lengths and areas of sectors of circles	
HSG-C.B.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.	**SE/TE:** 649-657, **Concept Byte:** 658, 660-666 **TE:** 657A-657B, 666A-666B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Expressing Geometric Properties with Equations	
HSG-GPE.A. Translate between the geometric description and the equation for a conic section	**SE/TE: Concept Byte:** 804-805
HSG-GPE.A.1. 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.	**SE/TE:** 798-803 **TE:** 803A-803B
Unit Level Standards	
Geometry	
Congruence	
HSG-CO.A. Experiment with transformations in the plane	
HSG-CO.A.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.	**SE/TE:** 649-657 **TE:** 657A-657B
Geometric Measurement & Dimension	
HSG-GMD.A. Explain volume formulas and use them to solve problems	
HSG-GMD.A.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 dissection arguments, Cavalieri's principle, and informal limit arguments.	**SE/TE: Concept Byte:** 659, 660-666 **TE:** 666A-666B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
Unit 7 - Modeling with 3- Dimensional Figures	
Content Expectations	
Numbers & Quantity	
Quantities	
HSN-Q.A. Reason quantitatively and use units to solve problems.	
HSN-Q.A.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; choose and interpret the scale and the origin in graphs and data displays.	**SE/TE:** 20-26, 28-33, 50-56, 59-67, **Concept Byte:** 68, 285-296, 353-358, 388-397, 432-438, 440-447, 491-498, 616-622, 623-628, 629-634, 635-641, 643-648, **Concept Byte:** 658, 660-666, **Concept Byte:** 667, 668-674, 699-707, 709-715, 717-724, 726-732, 733-740, 742-749 **TE:** 26A-26B, 33A-33B, 56A-56B, 67A-67B, 296A-296B, 358A-358B, 397A-397B, 438A-438B, 447A-447B, 498A-498B, 622A-622B, 628A-628B, 634A-634B, 641A-641B, 648A-648B, 666A-666B, 674A-674B, 707A-707B, 715A-715B, 724A-724B, 732A-732B, 740A-740B
Geometry	
Geometric Measurement & Dimension	
HSG-GMD.A. Explain volume formulas and use them to solve problems	
HSG-GMD.A.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 dissection arguments, Cavalieri's principle, and informal limit arguments.	**SE/TE: Concept Byte:** 659, 717-724, **Concept Byte:** 725 **TE:** 724A-724B
HSG-GMD.A.2. (+) Given an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.	**SE/TE:** 733-740 **TE:** 740A-740B
HSG-GMD.A.3. Use volume formulas for cylinders, pyramids, cones and spheres to solve problems.	**SE/TE:** 635-641, 717-724, 726-732, 733-740 **TE: Concept Byte:** 614-615, 641A-641B, 724A-724B, 732A-732B, 740A-740B

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MAISA CCSS Mathematics Curriculum Geometry	Pearson High School Mathematics Geometry
HSG-GMD.B. Visualize the relation between two-dimensional and three-dimensional objects	
HSG-GMD.B.4. Identify cross-sectional shapes of slices of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	**SE / TE:** 688-695, 806-811 **TE:** 695A-695B, **Concept Byte:** 696-697, 811A-811B
Modeling with Geometry	
HSG-MG.A. Apply geometric concepts in modeling situations	
HSG-MG.A.1. Use geometric shapes, their measures and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).	**SE / TE:** 507-513, 616-622, 623-628, 629-634, 699-707, 708-715, 717-724, 726-732, 733-740, 742-749 **TE:** 513A-513B, 622A-622B, 628A-628B, 634A-634B, 707A-707B, 715A-715B, 724A-724B, 732A-732B, 740A-740B, 749A-749B
HSG-MG.A.2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).	**SE / TE:** 742-749 **TE:** 749A-749B
HSG-MG.A.3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios).	**SE / TE:** 164-169 **TE:** 169A-169B
Unit Level Standards	
Not Applicable	

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