A Correlation of

Geometry
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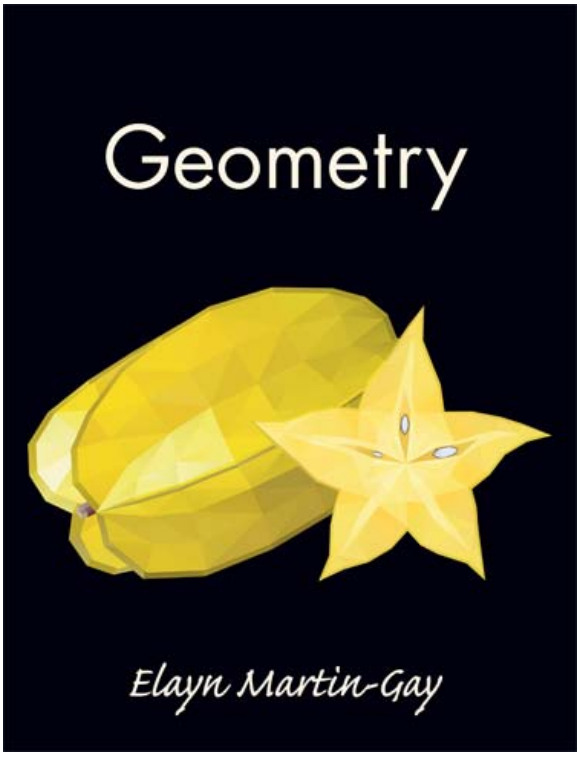

to the

Common Core State Standards for Mathematics - High School

PARCC Model Content Frameworks Mathematics - Geometry

ALWAYS LEARNING PEARSON

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to the Common Core State Standards for Mathematics - High School
PARRC Model Content Frameworks Mathematics - Geometry

Introduction

This document demonstrates how **Pearson's *High School Series*** by Elayn Martin-Gay, ©2016, meets the standards of the Common Core State Standards for Mathematics, PARRC Model Content Frameworks Mathematics - Algebra I. **Pearson's *High School Series*** by Elayn Martin-Gay, ©2016, consists of three fully-digital programs carefully crafted by award-winning author Elayn Martin-Gay. Elayn Martin-Gay firmly believes that with an accessible approach to math lessons, supported by student-friendly videos that elaborate on key math concepts, every math student can be successful in math. She has taught math at the University of New Orleans for more than 25 years and earned numerous teaching awards along the way. Martin-Gay's series of highly acclaimed videos are a key element of this robust High School Series, as well as her other bestselling College Math courses.

Algebra 1, Geometry, and Algebra 2 offer:
Consistency: All videos and content have been personally authored and presented by Elayn Martin-Gay offering a consistent voice throughout all three courses.
Unparalleled Videos: Over 3,000 videos by Elayn Martin-Gay are embedded into the eText and available to easily assign to students for step-by-step instructional and support.

Student Support
• **For Algebra 1 and 2**
The **Student Organizer** notebook, both in print and digital formats, help students stay organized, and teach to them develop the key habits of note-taking and journaling. The *Student Organizer* also includes topic-specific practice and homework problems.

• **For Geometry**
The **Student Video Organizer** encourages students to take notes and try practice exercises while watching Elayn Martin-Gay's lecture series. It provides ample space for students to write down key definitions and rules throughout the lectures. "Play" and "Pause" Button icons prompt students to follow along with Elayn for some exercises while they try others on their own.

Teacher support
• Teacher Professional Development videos give helpful teaching strategies for algebra and geometry topics.
• *Implementation Guides* offer teachers with pacing suggestions, mini-lessons for each section of the test, intervention tips, and closure questions.

Table of Contents

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Geometry	
Congruence G-CO	
Experiment with transformations in the plane	
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: 1.3:** Points, Lines, and Planes, **1.4:** Segments and Their Measures, **1.5:** Angles and Their Measure, **1.6:** Angle Pairs and Their Relationships, **1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **1.8:** Constructions – Basic Geometry Constructions, **2.6:** Reviewing Properties of Equality and Two-Column Proofs, **2.7:** Proving Theorems About Angles, **3.1:** Lines and Angles, **3.2:** Proving Lines Are Parallel, **3.3:** Parallel Lines and Angles Formed by Transversals, **3.4:** Proving Theorems About Parallel and Perpendicular Lines, **3.5:** Constructions – Parallel and Perpendicular Lines, **3.6:** Coordinate Geometry – The Slope of a Line, **3.7:** Coordinate Geometry – Equations of Lines, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **6.1:** Polygons, **6.2:** Parallelograms, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **6.4:** Rhombuses, Rectangles, and Squares, **6.5:** Trapezoids and Kites, **7.4:** Proving Triangles Are Similar, **12.1:** Circle Review and Tangent Lines
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: 8.1:** Rigid Transformations, **8.2:** Translations, **8.3:** Reflections, **8.4:** Rotations,**8.5:** Dilations, **8.6:** Compositions of Reflections, **11.1:** Solids and Cross Sections
3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	**SE/TE: 8.1:** Rigid Transformations, **8.3:** Reflections, **8.4:** Rotations, **8.6:** Composition of Reflections, **11.1:** Solids and Cross Sections

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	**SE/TE: 8.1:** Rigid Transformations, **8.2:** Translations, **8.3:** Reflections, **8.4:** Rotations, **8.6:** Composition of Reflections, **11.1:** Solids and Cross Sections
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: 8.2:** Translations, **8.3:** Reflections, **8.4:** Rotations, **8.5:** Dilations, **8.6:** Composition of Reflections
Understand congruence in terms of rigid motions	
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: 4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **8.1:** Rigid Transformations, **8.2:** Translations, **8.3:** Reflections, **8.4:** Rotations, **8.5:** Dilations, **8.6:** Composition of Reflections
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: 4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **7.3:** Similar Polygons , **7.4:** Proving Triangles Are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles
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: 4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **6.1:** Polygons, **7.3:** Similar Polygons , **7.4:** Proving Triangles Are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Prove geometric theorems	
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.*	**SE/TE: 1.3:** Points, Lines, and Planes, **1.4:** Segments and Their Measures, **1.5:** Angles and Their Measure, **1.6:** Angle Pairs and Their Relationships, **2.6:** Reviewing Properties of Equality and Two-Column Proofs, **2.7:** Proving Theorems About Angles, **3.1:** Lines and Angles, **3.2:** Proving Lines Are Parallel, **3.3:** Parallel Lines and Angles Formed by Transversals, **3.4:** Proving Theorems About Parallel and Perpendicular Lines, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **6.2:** Parallelograms
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: 4.1:** Types of Triangles, **4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **7.4:** Proving Triangles Are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles, **9.1:** The Pythagorean Theorem and Its Converse, **9.2:** Special Right Triangles
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: 6.2:** Parallelograms, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **6.4:** Rhombuses, Rectangles, and Squares, **6.5:** Trapezoids and Kites, **7.6:** Additional Proportions in Triangles

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Make geometric constructions	
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: 1.3:** Points, Lines, and Planes, **1.4:** Segments and Their Measures, **1.5:** Angles and Their Measure, **1.6:** Angle Pairs and Their Relationships, **1.8:** Constructions – Basic Geometry Constructions, **3.5:** Constructions – Parallel and Perpendicular Lines , **4.1:** Types of Triangles, **4.3:** Congruent Triangles by SSS and SAS, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **8.4:** Rotations, **10.3:** Areas of Regular Polygons, **10.4:** Perimeters and Areas of Similar Figures, **12.2:** Chords and Arcs, **12.5:** Coordinate Plane – Circles
13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.	**SE/TE: 4.1:** Types of Triangles, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **10.1:** Angle Measures of Polygons and Regular Polygon Tessellations, **10.3:** Areas of Regular Polygons, **10.6:** Areas of Circles and Sectors
Similarity, Right Triangles, and Trigonometry G-SRT	
Understand similarity in terms of similarity transformations	
1. Verify experimentally the properties of dilations given by a center and a scale factor:	**SE/TE: 7.3:** Similar Polygons, **8.5:** Dilations
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.	**SE/TE: 8.5:** Dilations
b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	**SE/TE: 7.3:** Similar Polygons, **7.6:** Additional Proportions in Triangles, **8.5:** Dilations

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
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 the proportionality of all corresponding pairs of sides.	**SE/TE: 7.3:** Similar Polygons, **7.4:** Proving Triangles are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles
3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	**SE/TE: 7.4:** Proving Triangles are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles
Prove theorems involving similarity	
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.	**SE/TE: 4.1:** Types of Triangles, **4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **7.4:** Proving Triangles are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles, **9.1:** The Pythagorean Theorem and Its Converse, **9.2:** Special Right Triangles
5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	**SE/TE: 4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **5.1:** Perpendicular and Angle Bisectors, **5.4:** Midsegments of Triangles, **7.3:** Similar Polygons , **7.4:** Proving Triangles are Similar, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Define trigonometric ratios and solve problems involving right triangles	
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: 9.2:** Special Right Triangles, **9.3:** Trigonometric Ratios, **9.4:** Solving Right Triangles
7. Explain and use the relationship between the sine and cosine of complementary angles.	**SE/TE: 9.3:** Trigonometric Ratios, **9.4:** Solving Right Triangles
8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.★	**SE/TE: 9.1:** The Pythagorean Theorem and Its Converse, **9.2:** Special Right Triangles, **9.3:** Trigonometric Ratios, **9.4:** Solving Right Triangles
Circles G-C	
Understand and apply theorems about circles	
1. Prove that all circles are similar.	**SE/TE: 10.6:** Areas of Circles and Sectors, **12.1:** Circle Review and Tangent Lines, **12.2:** Chords and Arcs
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: 10.6:** Areas of Circles and Sectors, **12.1:** Circle Review and Tangent Lines, **12.2:** Chords and Arcs, **12.3:** Inscribed Angles, **12.4:** Additional Angle Measures and Segment Lengths
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**SE/TE: 5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **12.1:** Circle Review and Tangent Lines, **12.3:** Inscribed Angles, **12.4:** Additional Angle Measures and Segment Lengths
Find arc lengths and areas of sectors of circles	
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: 10.5:** Arc Measures, **10.6:** Areas of Circles and Sectors, **12.2:** Chords and Arcs

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Expressing Geometric Properties with Equations G-GPE	
Translate between the geometric description and the equation for a conic section	
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: 12.5:** Coordinate Plane – Circles
Use coordinates to prove simple geometric theorems algebraically	
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: 1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **3.6:** Coordinate Geometry – The Slope of a Line, **3.7:** Coordinate Geometry – Equations of Lines, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **7.3:** Similar Polygons, **12.5:** Coordinate Plane – Circles
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: 3.6:** Coordinate Geometry – The Slope of a Line, **3.7:** Coordinate Geometry – Equations of Lines, **5.1:** Perpendicular and Angle Bisectors, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **6.3:** Proving that a Quadrilateral Is a Parallelogram
6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.	**SE/TE: 1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **7.2:** Proportion Properties and Problem Solving, **7.5:** Geometric Mean and Similarity in Right Triangles, **7.6:** Additional Proportions in Triangles

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.★	**SE/TE: 1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **2.1:** Perimeter, Circumference, and Area, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **10.2:** Areas of Triangles and Quadrilaterals with a Review of Perimeter
Geometric Measurement and Dimension G-GMD	
Explain volume formulas and use them to solve problems	
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: 10.5:** Arc Measures, Circumferences, and Arc Lengths of Circles, **10.6:** Areas of Circles and Sectors, **11.4:** Volumes of Prisms and Cylinders and Cavalieri's Principle, **11.5:** Volumes of Pyramids and Cones, **11.6:** Surface Areas and Volumes of Spheres, **12.5:** Coordinate Plane – Circles
3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.★	**SE/TE: 11.4:** Volumes of Prisms and Cylinders and Cavalieri's Principle, **11.5:** Volumes of Pyramids and Cones, **11.6:** Surface Areas and Volumes of Spheres, **11.7:** Areas and Volumes of Similar Solids
Visualize relationships between two-dimensional and three dimensional objects	
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.	**SE/TE: 8.4:** Rotations, **11.1:** Solids and Cross Sections

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
Modeling with Geometry G-MG	
Apply geometric concepts in modeling situations	
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: 1.3:** Points, Lines, and Planes, **1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **2.1:** Perimeter, Circumference, and Area, **2.7:** Proving Theorems About Angles, **3.1:** Lines and Angles, **3.5:** Constructions – Parallel and Perpendicular Lines, **3.6:** Coordinate Geometry – The Slope of a Line, **3.7:** Coordinate Geometry – Equations of Lines, **4.1:** Types of Triangles, **4.2:** Congruent Figures, **4.3:** Congruent Triangles by SSS and SAS, **4.4:** Congruent Triangles by ASA and AAS, **4.5:** Proofs Using Congruent Triangles, **4.6:** Isosceles, Equilateral, and Right Triangles, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.3:** Medians and Altitudes of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **6.1:** Polygons, **6.2:** Parallelograms, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **6.4:** Rhombuses, Rectangles, and Squares, **6.5:** Trapezoids and Kites, **7.1:** Ratios and Proportions, **9.1:** The Pythagorean Theorem and Its Converse, **9.2:** Special Right Triangles, **9.3:** Trigonometric Ratios, **9.4:** Solving Right Triangles**, 11.1:** Solids and Cross Sections, **11.2:** Surface Areas of Prisms and Cylinders, **11.3:** Surface Areas of Pyramids and Cones, **11.4:** Volumes of Prisms and Cylinders and Cavalieri's Principle, **11.5:** Volumes of Pyramids and Cones, **11.6:** Surface Areas and Volumes of Spheres, **11.7:** Areas and Volumes of Similar Solids

Common Core State Standards for Mathematics - High School PARCC Model Content Frameworks Mathematics - Geometry	**Geometry, ©2016 Martin-Gay Lessons**
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).★	Related material: **SE/TE: 10.2:** Areas of Triangles and Quadrilaterals with a Review of Perimeter, **10.4:** Perimeters and Areas of Similar Figures, **11.1:** Solids and Cross Sections, **11.2:** Surface Areas of Prisms and Cylinders, **11.3:** Surface Areas of Pyramids and Cones, **11.4:** Volumes of Prisms and Cylinders and Cavalieri's Principle, **11.5:** Volumes of Pyramids and Cones, **11.6:** Surface Areas and Volumes of Spheres, **11.7:** Areas and Volumes of Similar Solids
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).★	**SE/TE: 1.7:** Coordinate Geometry – Midpoint and Distance Formulas, **2.7:** Proving Theorems About Angles, **5.1:** Perpendicular and Angle Bisectors, **5.2:** Bisectors of a Triangle, **5.4:** Midsegments of Triangles, **5.5:** Indirect Proofs and Inequalities in One Triangle, **5.6:** Inequalities in Two Triangles, **6.1:** Polygons, **6.3:** Proving that a Quadrilateral Is a Parallelogram, **6.4:** Rhombuses, Rectangles, and Squares, **6.5:** Trapezoids and Kites, **8.5:** Dilations, **8.6:** Compositions of Reflections, **9.1:** The Pythagorean Theorem and Its Converse, **9.2:** Special Right Triangles, **9.3:** Trigonometric Ratios, **10.2:** Areas of Triangles and Quadrilaterals with a Review of Perimeter, **10.3:** Areas of Regular Polygons, **10.4:** Perimeters and Areas of Similar Figures, **10.5:** Arc Measures, Circumferences, and Arc Lengths of Circles, **10.6:** Areas of Circles and Sectors, **11.1:** Solids and Cross Sections, **11.2:** Surface Areas of Prisms and Cylinders, **11.3:** Surface Areas of Pyramids and Cones, **11.4:** Volumes of Prisms and Cylinders and Cavalieri's Principle, **11.5:** Volumes of Pyramids and Cones, **11.6:** Surface Areas and Volumes of Spheres, **11.7:** Areas and Volumes of Similar Solids