Correlation from Geometry to Common Core State Standards for Mathematical Content

Lesson		Standard(s)
Chapter 1: Basics of Geometry		
1.1	Points, Lines, and Planes	HSG-CO.A.1
1.2	Measuring and Constructing Segments	HSG-CO.A.1, HSG-CO.D.12
1.3	Using Midpoint and Distance Formulas	HSG-CO.D.12, HSG-GPE.B.7
1.4	Perimeter and Area in the Coordinate Plane	HSG-GPE.B.7, HSG-MG.A.1
1.5	Measuring and Constructing Angles	HSG-CO.A.1, HSG-CO.D.12
1.6	Describing Pairs of Angles	HSG-CO.A.1
Chapter 2: Reasoning and Proofs		
2.1	Conditional Statements	HSG-CO.C.9, HSG-CO.C.10, HSG-CO.C.11, HSG-SRT.B.4
2.2	Inductive and Deductive Reasoning	HSG-CO.C.9, HSG-CO.C.10, HSG-CO.C.11, HSG-SRT.B.4
2.3	Postulates and Diagrams	HSG-CO.C.9, HSG-CO.C.10, HSG-CO.C.11, HSG-SRT.B.4
2.4	Algebraic Reasoning	HSG-CO.C.9, HSG-CO.C.10, HSG-CO.C.11, HSG-SRT.B.4
2.5	Proving Statements about Segments and Angles	HSG-CO.C.9
2.6	Proving Geometric Relationships	HSG-CO.C.9
Chapter 3: Parallel and Perpendicular Lines		
3.1	Pairs of Lines and Angles	HSG-CO.A.1
3.2	Parallel Lines and Transversals	HSG-CO.C.9
3.3	Proofs with Parallel Lines	HSG-CO.C.9, HSG-CO.D.12
3.4	Proofs with Perpendicular Lines	HSG-CO.C.9, HSG-CO.D.12
3.5	Equations of Parallel and Perpendicular Lines	HSG-GPE.B.5, HSG-GPE.B.6

Lesson		Standard(s)
Chapter 4: Transformations		
4.1	Translations	HSG-CO.A.2, HSG-CO.A.4, HSG-CO.A.5, HSG-CO.B.6
4.2	Reflections	HSG-CO.A.2, HSG-CO.A.3, HSG-CO.A.4, HSG-CO.A.5, HSG-CO.B.6, HSG-MG.A.3
4.3	Rotations	HSG-CO.A.2, HSG-CO.A.3, HSG-CO.A.4, HSG-CO.A.5, HSG-CO.B.6
4.4	Congruence and Transformations	HSG-CO.A.5, HSG-CO.B.6
4.5	Dilations	HSG-CO.A.2, HSG-SRT.A.1a, HSG-SRT.A.1b
4.6	Similarity and Transformations	HSG-CO.A.5, HSG-SRT.A.2
Chapter 5: Congruent Triangles		
5.1	Angles of Triangles	HSG-CO.C.10, HSG-MG.A.1
5.2	Congruent Polygons	HSG-CO.B.7
5.3	Proving Triangle Congruence by SAS	HSG-CO.B.8, HSG-MG.A.1
5.4	Equilateral and Isosceles Triangles	HSG-CO.C.10, HSG-CO.D.13, HSG-MG.A.1
5.5	Proving Triangle Congruence by SSS	HSG-CO.B.8, HSG-MG.A.1, HSG-MG.A.3
5.6	Proving Triangle Congruence by ASA and AAS	HSG-CO.B.8
5.7	Using Congruent Triangles	HSG-SRT.B.5
5.8	Coordinate Proofs	HSG-GPE.B.4
Chapter 6: Relationships Within Triangles		
6.1	Perpendicular and Angle Bisectors	HSG-CO.C.9, HSG-MG.A.1
6.2	Bisectors of Triangles	HSG-CO.D.12, HSG-C.A.3, HSG-MG.A.1, HSG-MG.A.3
6.3	Medians and Altitudes of Triangles	HSG-CO.C.10
6.4	The Triangle Midsegment Theorem	HSG-CO.C.10, HSG-MG.A.1
6.5	Indirect Proof and Inequalities in One Triangle	HSG-CO.C.10
6.6	Inequalities in Two Triangles	HSG-CO.C.10

Correlation from Geometry to Common Core State Standards for Mathematical Content *(continued)*

Lesson		Standard(s)
Chapter 7: Quadrilaterals and Other Polygons		
7.1	Angles of Polygons	HSG-CO.C.11
7.2	Properties of Parallelograms	HSG-CO.C.11, HSG-SRT.B.5
7.3	Proving That a Quadrilateral is a Parallelogram	HSG-CO.C.11, HSG-SRT.B.5, HSG-MG.A.1
7.4	Properties of Special Parallelograms	HSG-CO.C.11, HSG-SRT.B.5, HSG-MG.A.1, HSG-MG.A.3
7.5	Properties of Trapezoids and Kites	HSG-SRT.B.5, HSG-MG.A.1
Chapter 8: Similarity		
8.1	Similar Polygons	HSG-SRT.A.2, HSG-MG.A.3
8.2	Proving Triangle Similarity by AA	HSG-SRT.A.3, HSG-SRT.B.5
8.3	Proving Triangle Similarity by SSS and SAS	HSG-SRT.B.4, HSG-SRT.B.5, HSG-GPE.B.5, HSG-MG.A.1
8.4	Proportionality Theorems	HSG-SRT.B.4, HSG-SRT.B.5, HSG-GPE.B.6
Chapter 9: Right Triangles and Trigonometry		
9.1	The Pythagorean Theorem	HSG-SRT.B.4, HSG-SRT.C.8
9.2	Special Right Triangles	HSG-SRT.C.8, HSG-MG.A.1
9.3	Similar Right Triangles	HSG-SRT.B.5
9.4	The Tangent Ratio	HSG-SRT.C.6, HSG-SRT.C.8
9.5	The Sine and Cosine Ratios	HSG-SRT.C.6, HSG-SRT.C.7, HSG-SRT.C.8
9.6	Solving Right Triangles	HSG-SRT.C.8, HSG-MG.A.1, HSG-MG.A.3
9.7	Law of Sines and Law of Cosines	HSG-SRT.D.9, HSG-SRT.D.10, HSG-SRT.D.11, HSG-MG.A.3

Lesson		Standard(s)
Chapter 10: Circles		
10.1	Lines and Segments That Intersect Circles	HSG-CO.A.1, HSG-C.A.2, HSG-C.A.4
10.2	Finding Arc Measures	HSG-C.A.1, HSG-C.A.2
10.3	Using Chords	HSG-C.A.2, HSG-MG.A.3
10.4	Inscribed Angles and Polygons	HSG-CO.D.13, HSG-C.A.2, HSG-C.A.3
10.5	Angle Relationships in Circles	HSG-C.A.2
10.6	Segment Relationships in Circles	HSG-C.A.2, HSG-MG.A.1
10.7	Circles in the Coordinate Plane	HSG-GPE.A.1, HSG-GPE.B.4
Chapter 11: Circumference, Area, and Volume		
11.1	Circumference and Arc Length	HSG-GMD.A.1, HSG-C.B.5, HSG-CO.A.1
11.2	Areas of Circles and Sectors	HSG-GMD.A.1, HSG-MG.A.2, HSG-C.B.5
11.3	Areas of Polygons	HSG-GMD.A.3
11.4	Three-Dimensional Figures	HSG-GMD.B.4
11.5	Volumes of Prisms and Cylinders	HSG-GMD.A.1, HSG-GMD.A.2, HSG-GMD.A.3, HSG-MG.A.1, HSG-MG.A.2, HSG-MG.A.3
11.6	Volumes of Pyramids	HSG-GMD.A.1, HSG-GMD.A.3, HSG-MG.A.1
11.7	Surface Areas and Volumes of Cones	HSG-GMD.A.1, HSG-GMD.A.3
11.8	Surface Areas and Volumes of Spheres	HSG-GMD.A.2, HSG-GMD.A.3, HSG-MG.A.1
Chapter 12: Probability		
12.1	Samples Spaces and Probability	HSS-CP.A.1
12.2	Independent and Dependent Events	HSS-CP.A.1, HSS-CP.A.2, HSS-CP.A.3, HSS-CP.A.5, HSS-CP.B.6, HSS-CP.B.8
12.3	Two-Way Tables and Probability	HSS-CP.A.4, HSS-CP.A.5
12.4	Probability of Disjoint and Overlapping Events	HSS-CP.A.1, HSS-CP.B.7
12.5	Permutations and Combinations	HSS-CP.B.9
12.6	Binomial Distributions	HSS-CP.B.9

Common Core State Standards for Mathematical Content Correlated to Algebra 1, Geometry, and Algebra 2

Standard	Descriptor	Algebra 1	Geometry	Algebra 2
Number and Quantity				
HSN-RN.A.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.	**6.2**		**5.1**
HSN-RN.A.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	**6.1, 6.2, 9.1,** 10.3		**5.1, 5.2,** 5.3, 5.4, 5.5, 6.1, 6.2, 6.6, 6.7
HSN-RN.B.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	**9.1**		
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.	**1.2,** 1.5, 3.4		
HSN-Q.A.2	Define appropriate quantities for the purpose of descriptive modeling.	3.3, 4.1, 5.1, 5.2, 5.3, 5.5, 6.6, 7.7, 8.2, 8.3, 8.6, 9.2, 9.4, 9.5, 10.2, 10.3		1.3, 2.2, 2.4, 3.1, 3.3, 3.4, 4.4, 9.6
HSN-Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	4.5, 6.2, 6.4, 8.6, 9.3, 10.1, 10.2		
HSN-CN.A.1	Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.			**3.2**
HSN-CN.A.2	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.			**3.2,** 3.4, 4.6
HSN-CN.C.7	Solve quadratic equations with real coefficients that have complex solutions.			**3.2, 3.3, 3.4,** 4.6
HSN-CN.C.8	Extend polynomial identities to the complex numbers.			3.2, **4.6**
HSN-CN.C.9	Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.			**4.6**
Algebra				
HSA-SSE.A.1	Interpret expressions that represent a quantity in terms of its context.			
	a. Interpret parts of an expression, such as terms, factors, and coefficients.	3.2, 3.3, 3.5, 7.1		3.1, 3.4, 4.2, 5.3, 6.1, 6.2, 7.3
	b. Interpret complicated expressions by viewing one or more of their parts as a single entity.	1.2, 6.4, 7.4		3.1, 4.4, 4.5, 6.1, 6.2

Boldface indicates a lesson in which the standard is a primary focus.