Concepts	Competencies	Key Vocabulary
Congruence & Similarity	Use properties of congruence, correspondence, and similarity involving 2- and 3-dimensional figures. Apply rigid transformations to determine and explain congruence. Prove geometric theorems about lines, angles, triangles, and parallelograms while focusing on validity of underlying reasoning. Using various methods, write formal proofs and/or use logic statements to construct or validate arguments. Make geometric constructions. Apply non-rigid transformations to determine and explain similarity. References: PACCS (CC.2.3.HS.A.1), (CC.2.3.HS.A.2), (CC.2.3.HS.A.3), (CC.2.3.HS.A.4), (CC.2.3.HS.A.5), (CC.2.3.HS.A.6), (CC.2.3.HS.A.11) EC (G.1.3.1.1), (G.1.3.1.2), (G.1.3.2.1)	Acute Angle Adjacent Angles Alternate Interior Angles Altitude Angle Angle Bisector Arc Arc Length Area Chord Circle Circumference Complementary Angles Composite Figure Compound Events Compound Figure Conditional Probability Congruence Correspondence Corresponding Angles Cylinder (Right Circular) Diameter Direct Proof Equilateral Triangle Independence Indirect Proof Isosceles Triangle Line Median Midpoint Non-rigid Transformation Obtuse Angle Parallel Parallelogram Perimeter Perpendicular Point Polyhedra Proof Proof by Contradiction Pyramid (Right) Pythagorean Identity Pythagorean Theorem Radius Ray
Trigonometry	Define and/or apply trigonometric ratios. Solve problems involving right triangles (Pythagorean Theorem, right triangle trigonometry) Apply trigonometry to general triangles (areas, law of sines, law of cosines) References: PACCS (CC.2.3.HS.A.7), (CC.2.2.HS.C.9) EC	

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	(G.2.1.1.1), (G.2.1.1.2), (G.1.3.2.1)	Rectangle Regular Polygon Rhombus Right Triangle Rigid Transformation Scalene Triangle Secant Sector Segment Semicircle Similarity Slope Sphere Square Supplementary Angles Surface Area Tangent Three-Dimensional Trapezoid Trigonometric Ratios Two-Dimensional Vertical Angles Volume
Circles	Identify, determine, and/or use parts of circles and segments, lines, and angles associated with circles. Extend the concept of similarity to determine arc lengths and areas of sectors. Understand and apply theorems about circles. References: PACCS (CC.2.3.HS.A.3),(CC.2.3.HS.A.8), (CC.2.3.HS.A.9) EC (G.1.1.1.1), (G.1.1.1.2), (G.1.1.1.3), (G.2.2.2.1), (G.2.2.2.2), (G.2.2.2.5)	
Analytic Geometry	Use coordinate geometry to prove theorems algebraically. Apply coordinate geometry to calculate distance and/or midpoint between two points. Apply coordinate geometry to relate slope to parallel and perpendicular lines. Use coordinate geometry to establish properties of 2-dimensional shapes. Translate between the geometric description and the equation for a circle and/or a parabola. References: PACCS (CC.2.3.HS.A.10), (CC.2.3.HS.A.11) EC (G.2.1.2.1), (G.2.1.2.2), (G.2.1.2.3)	
Measurement & Dimension	Use and/or compare measurements of angles. Use and/or develop procedures to determine, describe, or estimate measures of perimeter,	

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	circumference, area, surface area, and/or volume. Describe how a change in the linear dimension can affect perimeter, circumference, area, surface area, and/or volume. Visualize the relation between two-and three-dimensional objects. Apply geometric concepts in modeling situations. References: PACCS (CC.2.3.HS.A.3),(CC.2.3.HS.A.8), (CC.2.3.HS.A.9), (CC.2.3.HS.A.12), (CC.2.3.HS.A.13), (CC.2.3.HS.A.14) EC (G.2.2.1.1), (G.2.2.1.2), (G.2.2.2.1), (G.2.2.2.2), (G.2.2.2.3), (G.2.2.2.4), (G.2.2.2.5), (G.2.2.3.1), (G2.3.1.1), (G2.3.1.2), (G2.3.1.3), (G2.3.2.1)	
Probability	Apply probability to practical situations. Use area models to find probabilities. Use probability to evaluate outcomes of events. Understand independence and conditional probability and use them to interpret data. Compute probabilities of compound events. References: PACCS (CC.2.3.HS.A.14), (CC.2.4.HS.B.4), (CC.2.4.HS.B.5), (CC.2.4.HS.B.6) (CC.2.4.HS.B.7) EC (G.2.2.4.1)	