Geometry Syllabus, 2nd Semester (correlation with STAAR/EOC)

Legend:

Example **3[R]-G.5(B)**

- 3, The reporting category
- [R], Either Readiness or Supporting
- G.5, The TEKS
- (B) Expectation

[P], indicates a prerequisite skill

Unit 10: Areas of regular polygons

Lesson 01: Areas of regular (equilateral) triangles **1[R]-G.2(B); 4[R]-G.8(A)**

Lesson 02: Areas of regular quadrilaterals (squares) **1[R]-G.2(B); 4[R]-G.8(A)**

Lesson 03: Areas of regular hexagons **1[R]-G.2(B); 4[R]-G.8(A)**

Lesson 04: General area of regular polygons **1[R]-G.2(B); 4[R]-G.8(A)**

Lesson 05: Effects of dimension and area changes **1[R]-G.2(B)**
Units conversions

Cumulative review
Unit 11 review
Unit 11 test

Unit 11: Three dimensional objects

Lesson 01: Three dimensional drawings and views **1[R]-G.2(B); 2[R]-G.5(A,B); 3[S]-G.6(C); 4[S]-G.9(D)**

Lesson 02: Prisms and nets **1[R]-G.2(B); 2[R]-G.5(A,B); 3[S]-G.6(B)**

Lesson 03: Areas and volumes of prisms **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 04: More areas and volumes of prisms **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 05: Effects of dimension, area, and volume changes **1[R]-G.2(B); 2[R]-G.5(A,B); 5[R]-G.11(D)**

Cumulative review
Unit 12 review
Unit 12 test

Unit 12: Pyramids

Lesson 01: Pyramid fundamentals and associated nets **1[R]-G.2(B); 2[R]-G.5(A,B); 3[S]-G.6(B)**

Lesson 02: Surface areas and volumes of pyramids **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 03: More practice with areas and volumes of pyramids **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 04: Effects of dimension, area, and volume changes **1[R]-G.2(B); 2[R]-G.5(A,B); 5[R]-G.11(D)**

Cumulative review **3[R]-G.7(B)**
Unit 13 review
Unit 13 test

Unit 13: Circles

Lesson 01: Circle fundamentals **1[R]-G.2(B); 2[R]-G.5(A,B)**

Lesson 02: Shaded areas involving circles **1[R]-G.2(B); 2[R]-G.5(A,B)**

Lesson 03: Circle equations and inequalities **1[R]=G.2(B); 2[R}-G.5(A,B); 4[S]-G.9(c)**

Lesson 04: Tangents **4[S]-G.9(C)**

Cumulative review
Unit 14 review
Unit 14 test

Unit 14: Cylinders, cones, and spheres

Lesson 01: Cylinder fundamentals (area and volume) **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 02: Cone fundamentals (area and volume) **1[R]-G.2(B); 2[R]-G.5(A,B); 4[R]-G.8(D)**

Lesson 03: Sphere fundamentals (area and volume)**1[R]-G.2(B); 2[R]-G.5(A,B);** Rotation of two-dimensional objects; cross sections **4[R]-G.8(D)**

Cumulative review
Unit 15 review
Unit 15 test

Unit 15: Arcs, chords, central angles
Sector and segment area

Lesson 1: Arcs, semicircles, and central angles **4[R]-G.8(B); 4[S]-G.9(C)**

Lesson 2: Arcs and chords **4[R]-G.8(B); 4[S]-G.9(C)**

Lesson 3: Arc length sector area, and segment area **4[R]-G.8(B); 4[R]-G.8(E)**

Lesson 4: Area probability problems **1[S]-3.2(A); 4[S]-G.8(E); 4[S]-G.9(A)**
Construction: Circumscribing a triangle with a circle **1[S}-G.2(A)**

Cumulative review
Unit 16 review
Unit 16 test

Unit 16: Secants, tangents, and inscribed angles

Lesson 1: Inscribed angle **4[S]-G.9(C)**

Lesson 2: Angles formed by secants and tangents **4[S]-G.9(C)**

Lesson 3: More practice with inscribed angles and angles formed by secants and tangents **4[S]-G.9(C)**

Lesson 4: Special line segments associated with a circle **4[S]-G.9(C)**

Lesson 5: More practice with special segments **4[S]-G.9(C)**

Lesson 6: Construction: Inscribing circles inside triangles and regular polygons **1[R]-G.1(B)**

Cumulative review
Unit 17 review
Unit 17 test

Unit 17: Transformations; rigid motions
Slope relationships between lines

Lesson 1: Translations **2[S]-G.4(A); 2[R]-G.5(C)**

Lesson 2: Reflections **2[S]-G.4(A); 2[R]-G.5(C)**

Lesson 3: Rotations **2[S]-G.4(A); 2[R]-G.5(C)**

Lesson 4: Patterns **2[R]-G.5(B,C,D)**

Lesson 5: Perpendicular and parallel lines **1[R]-G.2(B), 2[R]-G.4(A), 3[R]-G.7(B)**

Cumulative review
Unit 17 review
Unit 17 test

Unit 18: Logic and Proofs (SSS, SAS, & ASA)

Lesson 1: Conditional statements **1[R]-G.3(A)**

Lesson 2: Introduction to two column proofs **1[R]-G.3(B,C)**
Algebraic proofs

Lesson 3: Corresponding parts of congruent triangles **1[R]-G.3(B,C)**

Lesson 4: Using SSS, SAS, & ASA with congruent triangles **4[S]-G.10(A); 4[R]-G.10(B)**

Lesson 5: Using SSS, SAS, & ASA to prove triangles congruent **4[S]-G.10(A); 4[R]-G.10(B)**

Unit 18 review
Unit 18 test

Semester summary

Semester review

Semester test

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In-depth Topics

Topic A: Sign rules **[P]**

Topic B: Derivation of the quadratic formula **[P]**

Topic C: Conic section applications and equation derivations **3[S]-G.6(A)**

Topic D: Euclidean/non-Euclidean geometry **1[S]-G.1(B,C)**

Topic E: Constructions **1[S]-G.2(A)**

Topic F: Exterior Angle Sum Theorem **1[R]-G.2(B)**

Topic G: Interior Angle Sum Theorem **1[R]-G.2(B)**

Topic H: Derivation of the Sine Law

Topic I: Derivation of the Cosine Law

Topic J: Derivation of a triangle area formula **4[R]-G.8(A)**

Topic K: Analytic Geometry and the use of equations in geometry **1[R]-G.2(B); 3[S]-G.7(A); 3[R]-G.7(B,C)**

Topic L: Density and measurement system conversions **4[S]-G.8(F)**

Topic M: Deductive and inductive reasoning **1[S]-G.3(D,E)**

Topic N: Area of regular polygons by apothem-perimeter **1[R]-G.2(B); 4[R]-G.8(A)**

Topic O: Tessellations **2[R]-G.5(C)**

Topic P: Fractals **2[R]-G.5(C)**