Geometry Syllabus

Report Period One

SOL Topic

G.3cd
Transformations Determine Line and Point Symmetry

Determine Transformation Using Coordinate Methods
· Reflections
· Translations
· Rotations
· Dilations

G.3a G.4abef
Fundamentals

Points, Lines, and Planes
Segments and Rays
Congruent Segment Construction
Distance and Midpoint Formula
Angles Basics · Angle Bisector Construction ·
Congruent Angle Construction
Perpendicular Bisector Construction Angle Pairs

G.1abc
Logic

Translate Verbal Argument into Symbolic Form
Identify and Use Converse, Inverse, and Contrapositive Determine the Validity of a Logical Argument

G.3ab G.2ab G.4cdg
Parallel and Perpendicular Lines

Apply Slope to Determine if Lines are Parallel or Perpendicular
Construct Parallel Lines
·Construct a Perpendicular Line through a Point on the Line
Construct a Perpendicular Line through a Point not on the Line Angle Relationships Solving Problems, Including Practical Problems Involving Angles Formed when Parallel Lines are Intersected by a Transversal
Proving Two or More Lines are Parallel

Report Period Two

SOL Topic

G.5abcd G.10a

Triangle Fundamentals

Classify
Name a Triangle based upon the Characteristics of Sides and Angles
Use Triangle Sum Theorem and Exterior Angle Theorem to Solve Problems
Identify Parts of an Isosceles Triangle and Solve Problems
Triangle Inequality Determine if a Triangle Exists Determine the Range of a Possible Third Side Order the Sides of a Triangle Based on its Angles AND Order the Angles of a Triangle Based on its Sides

G.6 Congruent Triangles

Identify Corresponding Parts of Congruent Triangles
Proving Congruent Triangles ·
Use Definitions, Postulates, and Theorems to Prove Triangles are Congruent
Use Algebraic Methods to Prove Triangles Congruent
Use Coordinate Methods to Prove Two Triangles are Congruent Use Deductive Proofs to Prove Two Triangles are Congruent

G.7 G.14a

Similar Triangles

Solve Problems Using Properties of Similar Triangles
Prove Similar Triangles ·
Use Definitions, Postulates, Theorems to Prove Triangles are Similar
Use Algebraic and Coordinates Methods to Prove Triangles are Similar
Prove Triangles are Similar Using Deductive Proofs

G.8 Right Triangles

Pythagorean Theorem
Use Pythagorean Theorem to Solve Right Triangles
Use the Converse of the Pythagorean to Determine if a Triangle is Right
Solve Problems Using Properties of Special Right Triangles
Solve Right Triangles Using Trigonometric Ratios

Report Period 3

SOL **Topic**

G.10abc G.14a G.4h

Polygons and Tesselations

Solve Problems, Including Practical Problems Involving Angles of Convex Polygons
Determine the Number of Sides of a Regular Polygon Tesselations
Construct and Justify the Construction of an Equilateral Triangle, Square, and a Regular Hexagon Inscribed in a Circle

G.9

Quadrilaterals

Verify and Use Properties of Quadrilaterals to Solve Problems Including Practical Problems

G.12

Equation of Circles

Solve Problems Involving Equations of Circles

G.11abcd

Circles

Circle Fundamentals
Determine Angle and Arc Measures
Determine Arc Length
Determine Lengths of Segments
Determine Arc Length
Determine Area of a Sector

Report Period 4

SOL **Topic**

G.13 G.14bcd

Surface Area and Volume

Use Surface Area and Volume of Three-Dimensional Objects to Solve Practical Problems
Determine How Changes in One or More Dimensions of a Figure Affect Area and/or Volume of the Figure

Determine how changed in Area and/or Volume of a Figure Affect One or More Dimensions of the Figure Solve Problems about Similar Geometric Figures