

Southern Regional High School
Manahawkin, New Jersey

Course Syllabus

Department: Mathematics

Course: Geometry

Marking Period 1

Topics to be covered:

- Classroom Expectations/Grading
- Building Blocks, Measurement, Angle Relationships, Basic Constructions, Coordinate Geometry
- (Midpoint, Distance Formulas), Perimeter, Circumference, and Area
- Reasoning (Inductive/Deductive), Algebraic Properties of Geometry, Proof Introduction
- Parallel lines and transversals and their converses, Perpendicular lines, Triangle Exterior Angle Theorem, Construction of Parallel and Perpendicular Lines, Slope/Equations of Parallel and Perpendicular Lines on the Coordinate Plane
- Perimeter, Circumference and Area of Circles and rectangular figures, Applications to Probability
- Quarterly

Marking Period 2

Topics to be covered:

- Patterns and Inductive reasoning, Conditional Statements, Deductive reasoning in Algebra and Geometry (Properties of equality)
- Congruency in Polygons, Triangle Congruency Conjectures, CPCTC, Properties and Relationships in
- Isosceles, Equilateral, Overlapping, and Right Triangles, Continuation of 2 Column Proofs
- Triangle Mid-segment Property, Special Triangle Segments (Medians, Altitudes, Perpendicular Bisectors) and their Properties (Concurrency), Triangle Inequalities
- Quarterly

Marking Period 3

Topics to be covered:

- Similarity, Similar Triangles and Proofs, Right Triangle Similarity, Proportions in Triangles (Angle Bisector, Parallel to the Opposite Side), Perimeter and Area of similar figures
- Algebraic Reviews as applicable throughout the marking period as they apply to topics
- Pythagorean Theorem, Converse of Pythagorean Theorem, 30-60-90 and Isosceles Right Triangle Properties, Trigonometry, Angles of Elevation and Depression
- Polygon Angle Sum (interior and exterior), Properties of Special Quadrilaterals (Parallelogram, Rhombus, Rectangle, Square, Kite, Trapezoid), Applications to Coordinate Geometry of all properties, Proofs
- Quarterly

Marking Period 4

Topics/Units to be covered:

- Nets, Solids and Cross Sections, Surface Area and Volume of Prisms, Pyramids, Cylinders, Cones, and Spheres, Similar Figure Relationships with Area and Volume
- Isometries (Translation, Reflection, Rotation) and the Composition of Isometries, Dilations
- Circles, Arc Length, Arc Measure, Area of Segments and Sectors.
- Circles, Properties of Tangents, Chord and Arc Properties, Inscribed Angle Properties
- Final Exam Review
- Final Exam