

Southern Regional High School

Manahawkin, New Jersey

Course Syllabus

Department: Math

Course: Geometry Advanced

Marking Period 1

Topics/Units to be covered:

- Grading policy/classroom expectations
- Use of sketchpad
- Definitions (Angles, Triangles, Quadrilaterals, etc)
- Use of tools (compass, straightedge) – Symmetry, Line, circle designs, perspective drawing...
- Geometric Constructions
- Patterns
- Quarterly

Marking Period 2

Topics/Units to be covered:

- Linear and quadratic patterns – scatter plots, use of graphing calculator
- Angle relations (vertical, linear pairs, parallel lines and transversals, triangles)
- Congruent triangles (sss, sas, aas, asa) 2 column proofs
- Sum of interior and exterior angles of polygons, kite, trapezoid, midsegments
- Begin Circles
- Quarterly

Marking Period 3

Topics/Units to be covered:

- Circles (arc measure and length, circumference, tangents, inscribed and central angles)
- Area (Rectangle, parallelogram, triangle, trapezoid, kite, regular polygon, introduction to integration as area under the curve using geometric shapes)
- Surface area
- Tessellations (translation, rotation, reflection) dilation
- Pythagorean theorem
- Quarterly

Marking Period 4

Topics/Units to be covered:

- Pythagorean Theorem, Equation of circles, Right triangle trig., angle of elevation, heron's formula for finding area of a triangle
- Volume
- Similarity
- Final exam