Geometry/Geometry Honors

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| Quarter  | Week | Major Concepts/Topics | Resources1 | Benchmark(s) |
| Qtr 1 | 8/10-9/1 | **Unit 1: Basics of Geometry and Constructions*** Defined and Undefined Terms
* Isometry
* Dilations and Partitions
* Transformations on the plane
* Congruence and Similarity
* **Symmetries**
* Line Segments
* Constructions
 | 1.1-1.21.31.41.5-1.61.7**1.H1**1.81.9-1.12 | MA.912.GR.2.2MA.912.GR.2.3MA.912.GR.2.6MA.912.GR.2.8MA.912.GR.5.1MA.912.GR.5.2**MA.912.GR.2.4** |
| 9/2-9/15 | **Unit 2: Proofs and Logic*** Introduction to Euclidean Geometry
* Geometric Reasoning
* Logical Reasoning
* Proofs
 | 2.12.22.3-2.62.7-2.8 | MA.912.GR.1.1MA.912.LT.4.10MA.912.LT.4.3 |
| 9/16-9/28 | **Unit 3: Lines and Angles*** Proving Angle Relationships
* Vertical and Corresponding Angles
* Angles with Parallel Lines
* Solving Problems Using Angle Relationships
* Angle Proofs
 | 3.13.23.3-3.53.6-3.73.8-3.9 | MA.912.GR.1.1MA.912.LT.4.10MA.912.LT.4.3 |
| 9/29-10/7 | **Unit 4: Rigid Motion and Congruence*** Algebraic Descriptions of Transformations
* Sequences of Transformations
* Isometry
* Congruence
 | 4.1-4.24.3-4.54.64.7-4.8 | MA.912.GR.2.1MA.912.GR.2.2MA.912.GR.2.3MA.912.GR.2.5MA.912.GR.2.6 |
| Qtr 2 | 10/10-10/25 | **Unit 5: Triangle Congruence*** Triangle Congruence (SSS, SAS, AAS, ASA, HL, CPCTC)
* Drawing Conclusions and Proving Congruence
* **Definition of Congruence with Rigid Motion**
* Congruence in Two-Dimensional Figures
 | 5.1-5.4, 5.75.5-5.6, 5.8**5.H1**5.9-5.10 | MA.912.GR.1.2MA.912.GR.1.6MA.912.GR.2.1MA.912.GR.2.3MA.912.GR.2.6MA.912.GR.5.1**MA.912.GR.2.7**MA.912.LT.4.10 |
| 10/26-11/16 | **Unit 6: Dilations and Similarity*** Dilations
* Sequences of Transformations with Dilation
* Distance
* Drawing and Similarity in Transformations
* **Proving all Circles are Similar**
* **Proofs by Contradiction**
* Triangle Similarity
* Similar Figures
* Problems involving Similarity including Real World
 | 6.16.2, 6.46.36.5-6.6**6.H1****6.H2**6.7-6.96.106.11-6.13 | MA.912.GR.2.1MA.912.GR.2.3MA.912.GR.2.8MA.912.GR.1.6**MA.912.GR.2.9****MA.912.GR.6.5****MA.912.LT.4.8** |
|  | 11/17-12-16 | **Unit 7: Trigonometric Ratios*** Pythagorean Theorem
* Definitions of Trigonometric Ratios
* Trigonometric Rations in the Coordinate Plane
* Special Right Triangles
* Unit Circle
* Trigonometry in the Real World
* **Law of Sines and Cosines**
* **Area of a Triangle Using the Sine Ratio**
 | 7.17.2-7.37.4-7.57.67.77.8-7.9**7.H1-7.H2****7.H3** | MA.912.T.1.1MA.912.T.1.2**MA.912.T.1.3****MA.912.T.1.4** |
| Qtr 3 | 1/4-1/18 | **Unit 8: Proving Relationships and Theorems(Quadrilaterals)*** Parallelograms
* Kites
* Trapezoids
* Real World Quadrilaterals
 | 8.1-8.38.48.5, 8.78.6 | MA.912.GR.1.4MA.912.LT.4.10MA.912.GR.1.5 |
| 1/19-2/1 | **Unit 9: 2D and 3D Shapes*** Area of 2D Shapes
* Density
* Cross Sections
* Solids of Rotations
* Cavalieri’s Principle
* Volume
* Surface Area
* How Does Dilation Affect Area and Volume
 | 9.19.29.39.49.59.6-9.79.8-9.99.10-9.11 | MA.912.GR.4.1MA.912.GR.4.2MA.912.GR.4.4MA.912.GR.4.5MA.912.GR.4.3MA.912.GR.4.6 |
| 2/2-2/21 | **Unit 10: Arcs and Angle Relationships in Circles*** Sectors
* Arc Length
* Radian Measure
* Solving Problems involving Circle Parts
* **Constructing Tangent Lines**
 | 10.110.210.310.4-10.9**10.H1** | MA.912.GR.6.4MA.912.GR.6.2**MA.912.GR.5.5** |
| 2/22-3/10 | **Unit 11: Justifying Relationships in Polygons with Circles*** Constructions with Triangles and Circles
* **Inscribing Polygons in Circles**
* Solving Problems with Inscribed Circles
* Interior and Exterior Angles of Triangles
* Triangle Inequality Theorem
* Centroid of a Triangle
* Triangle Midsegment Theorem
* Solving Problems with Triangle Relationships
 | 11.1-11.2**11.H1**11.3-11.411.511.611.711.811.9 | MA.912.GR.5.3MA/912.GR.6.3MA.912.GR.1.3MA.912.LT.4.10**MA.912.GR.5.4** |
| Qtr 4 | 3/13-4/14 | **Unit 12: Segment Relationships in Circles*** Solving Problems with Circle Parts and Lines
* Pythagorean Theorem and Tangent Lines
* Lengths of Secants, Tangents, Segments, and Chords in a Circle
* Equation of a Circle
* Graphing Circles
 | 12.1-12.412.512.612.7-12.812.9 | MA.912.GR.6.1MA.912.GR.7.2MA.912.GR.7.3 |
|  4/17-5/10 | **Unit 13: Shapes in the Coordinate Plane*** Parallel and Perpendicular Lines
* Circles in the Coordinate Plane
* Points on a Circle
* Partitioning Lines Segments
* Weighted Averages
* Classifying Triangles
* Centroids of Triangles
* Classifying Quadrilaterals
* Figures, Congruence, and Similarity
* Perimeter and Area on the Coordinate Plane
* Real World Problems in the Coordinate Plane
 | 13.113.213.313.413.513.613.713.8-13.1013.11-13.1213.1313.14 | MA.912.GR.3.1MA.912.GR.3.2MA.912.GR.3.3MA.912.GR.3.4MA.912.GR.7.2 |

Review will take place at the end of Unit 13 as of May 11 until EOC is complete

Projects will take place once EOC testing is complete

1 Resources listed are from *Math Nation Geometry* (2022). Other supplemental resources may be utilized as needed.

**Bold Sections indicate Honors Lessons and Benchmarks that are required for students taking Honors Geometry**