

# GEOMETRY ACCELERATED SYLLABUS

2019- 2020 Academic School-Year

## Marking Period 1

### Chapter 1 – Basics of Geometry (Test 1.1-1.6)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
1.1	Points, Lines, and Planes	G-CO.A.1	Big Ideas Text pg.8 #7-34, 47, 50, 55
1.2	Measuring and Constructing Segments	G-CO.A.1; G-CO.B.7; A-CED.A.1	Big Ideas Text pg.16 #9-19, 20-22, 26, 29 Teacher created worksheet using Kuta software or other supplemental material to supplement factoring problems.
1.3	Use Midpoint and Distance Formula	G-GPE.B.7	Big Ideas Text pg.24 #7-10, 15-34, 37
1.4	Perimeter and Area in the Coordinate Plane	G-CO.A.1	Big Ideas Text pg.34 #3-24, 35-36
1.5	Measuring and Construction Angles	G-CO.A.1; G-CO.B.7; G-CO.D.12	Big Ideas Text pg.43 #3-8, 21-30, 33-40, 42-46, 53-54 Teacher created worksheet using Kuta software or other supplemental material to supplement factoring problems.
1.6	Describing Pairs of Angles	G-MG.A.1	Big Ideas Text pg.52 #3-22, 32-41, 46

### Chapter 2 – Reasoning and Proof (Test 2.1-2.6)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
2.1	Conditional Statements	G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg.71 #1-2, 7-38
2.2	Inductive and Deductive Reasoning	G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg.80 #9-34
2.3	Postulates and Diagrams	G-CO.A.1; G-CO.C.9	Big Ideas Text pg.87 #5-23
2.4	Algebraic Reasoning	A-REI.A.1; G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg.96 #5-20, 25-40
2.5	Proving Statements about Segments and Angles	G-CO.A.1; G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg.103 #3-10, 13-15 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.
2.6	Proving Geometric Relationships	G-CO.C.9	Big Ideas Text pg.111 #3-16, 18, 19(as a 2 column), 20-24 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.

### Chapter 3 – Parallel and Perpendicular Lines (Test: 3.1-3.4)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
3.1	Pairs of Lines and Angles	G-CO.A.1; G-CO.C.9; G-CO.D.12	Big Ideas Text pg.129 #3-18, 23-31
3.2	Parallel Lines and Transversals	G-CO.C.9	Big Ideas Text pg.135 #3-13, 14, 17, 21 Teacher created worksheet using Kuta software or other supplemental material for factoring examples and Parallel Line Proofs.
3.3	Proofs with Parallel Lines	G-CO.C.9	Big Ideas Text pg.142 #3-8, 13-18, 21-25, 33-36
3.4	Proofs with Perpendicular Lines	G-CO.C.9	Big Ideas Text pg.153 #16-23, 26, 27

### Section 3.5: Formative Assessment

3.5	Write and Graph Equations of Lines	F-IF.B.5, F-IF.B.6	Big Ideas Text pg.160 #3-20
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## Marking Period 2

### Chapter 4 – Transformations (Test: 4.1-4.5)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
4.1	Translations	G-CO.A.2, G-CO.A.3, G-CO.B.6	Big Ideas Text pg.178 #3-24, 29-30
4.2	Reflections	G-CO.A.2, G-CO.A.3, G-CO.A.4	Big Ideas Text pg.186 #3-26
4.3	Rotations	G-CO.A.2, G-CO.A.3, G-CO.A.4, G-CO.A.5, G-CO.B.6	Big Ideas Text pg.194 #7-24, 28
4.4	Congruence and Transformations	G-CO.A.5, G-CO.B.6	Big Ideas Text pg.204 #3-6, 25-28 **The topics in this section should be incorporated throughout the chapter, a separate lesson is not needed.
4.5	Dilations	G-CO.A.2, G-SRT.A.1a, G-SRT.A.1b	Big Ideas Text pg.212 #3-6, 15-35, 51 **Dilations centered around points other than origin should be covered.

## Chapter 5 – Congruent Triangles (Test: 5.1-5.7)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
5.1	Angles of Triangles	G-CO.C.10, G-MG.A.1)	Big Ideas Text pg.236 #3-6, 11-36, 49-52
5.2	Congruent Polygons	G-CO.B.7	Big Ideas Text pg.243 #1-14
5.3	Proving Triangle Congruence by SAS	G-CO.B.8, G-MG.A.1	Big Ideas Text pg.249 #9-20, 25 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.
5.4	Equilateral and Isosceles Triangles	G-CO.C.10, G-CO.D.13, G-MG.A.1	Big Ideas Text pg.256 #3-16, 23-26 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.
5.5	Proving Triangle Congruence by SSS	G-CO.B.8, G-MG.A.1, G-MG.A.3	Big Ideas Text pg.266 #3-10, 13-16, 19-20 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.
5.6	Proving Triangle Congruence by ASA and AAS	G-CO.B.8	Big Ideas Text pg.274 #3-12, 15-20, 26 Teacher created worksheet using Kuta software or other supplemental material for extra proof examples.
5.7	Using Congruent Triangles	G-SRT.B.5	Big Ideas Text pg.281 #3-8 Teacher created worksheet using Kuta software or other supplemental material to supplement CPCTC proofs. Students should be able to prove triangles congruent, use CPCTC, and one extra step (midpoint or angle bisector).

## Chapter 6 – Relationships within Triangles (Test: 6.1-6.5)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
6.1	Perpendicular and Angle Bisectors	G-CO.C.9, G-MG.A.1	Big Ideas Text pg.306 #3-18
6.2	Bisectors of Triangles	G-CO.D.12, G-C.A.3, G-MG.A.1, G-MG.A.3	Big Ideas Text pg.315 #3-6, 11-16, 28-32, 35-36
6.3	Medians and Altitudes of Triangles	G-CO.C.10	Big Ideas Text pg.324 #3-18, 27-36, 41-44
6.4	The Triangle Midsegment Theorem	G-CO.C.10, G-MG.A.1	Big Ideas Text pg.333 #7-21

6.5	Indirect Proof and Inequalities in One Triangle **Only cover inequalities in one triangle.	G-CO.C.10	Big Ideas Text pg.340 #11-24, 35-36
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## Marking Period 3

### Chapter 7 – Quadrilaterals and Other Polygons (Test: 7.1-7.5)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
7.1	Angles of Polygons	G-CO.C.11	Big Ideas Text pg.364 #3-34, 37-41, 45
7.2	Properties of Parallelograms	G-CO.C.11, G-SRT.B.5	Big Ideas Text pg.372 #3-22, 31-33, 39, 43 Teacher created worksheet using Kuta software or other supplemental material for factoring problems.
7.3	Proving that a Quadrilateral is a Parallelogram	G-CO.C.11, G-SRT.B.5, G-MG.A.1	Big Ideas Text pg.381 #3-23, 33-34 Teacher created worksheet using Kuta software or other supplemental material for factoring problems.
7.4	Properties of Special Parallelograms	G-CO.C.11, G-SRT.B.5, G-MG.A.1, G-MG.A.3	Big Ideas Text pg.393 #3-54, 61-63, 65-70
7.5	Properties of Trapezoids and Kites	G-SRT.B.5, G-MG.A.1	Big Ideas Text pg.403 #7-12, 15-28

### Chapter 8 – Similarity (Test: 8.1-8.4)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
Ratios Supplement	Ratios and Proportions: Mc Dougal Littel Geometry Section 6.1	N-Q.A.1, A-CED.A.1	McDougal Little Geometry pg.360 #2-36, 42-46, 49-51, 57
8.1	Similar Polygons	G-SRT.A.2, G-MG.A.3	Big Ideas Text pg.423 #3-24, 28-34, 37-42
8.2	Proving Triangles Similar by AA	G-SRT.A.3, G-SRT.B.5	Big Ideas Text pg.431 #3-20
8.3	Proving Triangle Similarity by SSS and SAS	G-SRT.B.4, G-SRT.B.5, G-GPE.B.5, G-MG.A.1	Big Ideas Text pg.441 #3-10, 13-16, 20-26
8.4	Proportionality Theorem	G-SRT.B.4, G-SRT.B.5, G-GPE.B.6	Big Ideas Text pg.450 #3-8, 13-26, 29-30

## Chapter 9 – Right Triangles and Trigonometry (Test: 9.1-9.6)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
9.1	The Pythagorean Theorem	G-SRT.B.4, G-SRT.C.8	Big Ideas Text pg.468 #3-28, 31-34
9.2	Special Right Triangles	G-SRT.C.8, G-MG-A.1	Big Ideas Text pg.475 #3-16
9.3	Similar Right Triangles	G-SRT.B.5	Big Ideas Text pg.482 #5-34
9.4	The Tangent Ratio	G-SRT.C.6, G-SRT.C.8	Big Ideas Text pg.491 #3-16, 21, 25
9.5	The Sine and Cosine Ratios	G-SRT.C.6, G-SRT.C.7, G-SRT.C.8	Big Ideas Text pg.498 #3-22, 27-30
9.6	Solving Right Triangles	G-SRT.C.8, G-MG.A.1, G-MG.A.3	Big Ideas Text pg.505 #3-19, 21, 24

## Marking Period 4

## Chapter 10 – Circles (Test: 10.1-10.4)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
10.1	Lines and Segments That Intersect Circles	G-CO.A.1, G-C.A.2, G-C.A.4	Big Ideas Text pg.534 #5-10, 15-34 Teacher created worksheet using Kuta software or other supplemental material for factoring problems.
10.2	Finding Arc Measures	G-C.A.1, G-C.A.2	Big Ideas Text pg.542 #3-24, 26-31
10.3	Using Chords	G-C.A.2, G-MG.A.3	Big Ideas Text pg.549 #3-11, 13-17
10.4	Inscribed Angles and Polygons	G-CO.D.13, G-C.A.2, G-C.A.3	Big Ideas Text pg.558 #3-17, 19-21

## Chapter 10 – Circles (Test: 10.5 - 10.7)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
10.5	Angle Relationships in Circles	G-C.A.2	Big Ideas Text pg.566 #3-22, 25
10.6	Segment Relationships in Circles	G-C.A.2, G-MG.A.1	Big Ideas Text pg.573 #3-18
10.7	Circles in the Coordinate Plane	G-GPE.A.1, G-GPE.B.4	Big Ideas Text pg.579 #3-14, 19-22

## Chapter 11 – Circumference, Area, and Volume (Test 11.1-11.3)

Section	Title	NJSLS	Suggested Problems
			*Teachers should also use mixed review as needed.
11.1	Circumference and Arc Length	G-GMD.A.1, G-C.B.5, G-CO.A.1	Big Ideas Text pg.598 #3-18, 23
11.2	Areas of Circles and Sectors	G-GMD.A.1, G-MG.A.2, G-C.B.5	Big Ideas Text pg.606 #3-10, 15-28, 30-32
11.3	Areas of Polygons	G-GMD.A.3	Big Ideas Text pg.614 #3-28

## Chapter 11: Measuring Length and Area (Project: 11.4-11.8)

11.4 Three-Dimensional Figures (*NJSLS-G-GMD.B.4*)

11.5 Volumes of Prisms and Cylinders (*NJSLS-G-GMD.A.1, NJSLS-G-GMD.A.2, NJSLS-G-GMD.A.3, NJSLS-G-MG.A.3, NJSLS-G-MG.A.2, NJSLS-G-MG.A.3*) (*Formulas Given*)

11.6 Volumes of Pyramids (*NJSLS-G-GMD.A.1, NJSLS-G-GMD.A.3, NJSLS-G-MG.A.1*) (*Formulas Given*)

11.7 Surface Area and Volumes of Cones (*NJSLS-G-GMD.A.1, NJSLS-G-GMD.A.3*) (*Formulas Given*)

11.8 Surface Area and Volumes of Spheres (*NJSLS-G-GMD.A.2, NJSLS-G-GMD.A.3, NJSLS-G-MG.A.1*) (*Formulas Given*)

- Students are required to have proficiency in all prerequisite topics for Algebra 1 and Geometry. Those who do not demonstrate proficiency will be required to seek additional help after school to close their achievement gap in order to be successful in this course.
- Students are required to learn and utilize a graphing calculator (TI 84+) in this course. They are encouraged to purchase a graphing calculator, but not required. Classroom sets are available for teachers to use as needed. In addition, free on-line graphing apps and programs are promoted by teachers for students on homework.
- Students are required to participate in both small and large group discussions and activities, as directed.
- Students are required to complete a project each marking period, including those which require the use of technology.

### Resources

Text Book:                    *Geometry*, Big Ideas Math

Supplemental Materials:    Big Ideas Math Geometry Practice Workbook  
     Dynamic Geometry Software  
     Geometer’s Sketchpad  
     Kuta Infinite Geometry  
     [McDougal Littell Geometry Resources](#)  
     (to open the google folder, right click and copy  
     hyperlink, then paste it into a browser – cannot click  
     on link directly)

### Assessment Information

#### Department of Mathematics – Geometry A

<b>Marking Period 1</b>	<b>Marking Period 2</b>	<b>Marking Period 3</b>	<b>Marking Period 4</b>
Major (MAJ): Summative 35%	Major (MAJ): Summative 35%	Major (MAJ): Summative 35%	Major (MAJ): Summative 35%
Benchmark (BMK): 20%	Benchmark (BMK): 20%	Benchmark (BMK): 20%	Benchmark (BMK): 20%
Project (PRJ): 10%	Project (PRJ): 10%	Project (PRJ): 10%	Project (PRJ): 10%
Minor (MIN): Formative 20%	Minor (MIN): Formative 20%	Minor (MIN): Formative 20%	Minor (MIN): Formative 20%
Class Participation (CP): 5%	Class Participation (CP): 5%	Class Participation (CP): 5%	Class Participation (CP): 5%
Homework (HW): 10%	Homework (HW): 10%	Homework (HW): 10%	Homework (HW): 10%