

10th Grade Geometry - Unit 9 Angle Relationships

Bronx Early College Academy

Christopher J. Huson PhD

25 March 2019

9.1 Internal & external triangle angles, transversals Monday 25 March

9.2 Geogebra - Common angular situations: triangles, transversals Tuesday 26 March

9.3 Isosceles triangles Thursday 28 March

9.4 Circle angles Friday 29 March

9.5 Sectors, arcs, and chords Monday 1 April

9.6 Test review Wednesday 3 April

9.7 Unit test Thursday 4 April

GQ: How do we name the angles of a transversal intersecting parallels?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.2 Monday 25 March

Do Now Triangle angles handout

1. Internal & external angles sums of a triangle
2. Solving algebra embedded in geometry situations
3. Vertical, complementary, and supplementary relationships

Lesson: Common angular situations: intersections, triangles, transversals

Homework: Practice problems handout

GQ: How do we use technology to explore geometry?

CCSS: MP5 Use appropriate tools strategically: dynamic geometry software 9.2 Tuesday
26 March

Project: Polygon sum of internal angles theorem

1. Write a paper illustrating why a polygon's internal angles sum to $S = (n - 2)180^\circ$, where n is the number of sides
2. Spicy: Use color & line variations for clarity (not decoration)
3. Construct in Geogebra, compile in Word: add heading & title, text, and formulas using Microsoft's equation editor
4. Email me: Last-Title.pdf, with subject line & message
5. Rubric: correct, aesthetics, MLA & email standards

SAT tomorrow, Test corrections due Thursday

Homework: Complete project (due by 10:00 pm), problem set

GQ: How do we analyze isosceles triangles in situations?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.3 Thursday 28 March

Do Now Triangle angles handout

1. Internal & external angles sums of a triangle
2. Vertical, complementary, and supplementary relationships
3. Solving algebra embedded in geometry situations

Lesson: Isosceles base angle theorem, circle radii

Homework: Practice problems handout

GQ: How do we name the angles within a circle?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.4 Friday 29 March

Do Now Isosceles triangles handout

1. Isosceles base angle theorem
2. Vertical, complementary, and supplementary relationships
3. Solving algebra embedded in geometry situations

Lesson: Central angle measures, included half-angle theorem

Homework: Practice problems handout

GQ: How do we calculate the angles of secant and chord intersections?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.5 Monday 1 April

Do Now Circle angles handout

1. Central angle measures
2. Included (half-angle) theorem
3. Solving algebra embedded in geometry situations

Lesson: Central angle measures, included half-angle theorem

Homework: Practice problems handout

GQ: How do we use the scale factor to calculate segment lengths?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.6 Wednesday 3 April

Do Now Similar triangle handout

1. Naming corresponding relationships
2. Determining equal ratios (to scale factor)
3. Applying similarity relationships in situations

Lesson: Common angle calculations: parallels, triangles, circles

Assessment: Unit test tomorrow

Homework: Study for test

GQ: How do we apply angle relationships?

CCSS: HSG.CO.D.12 Congruence, geometric constructions

9.7 Thursday 4 April

Assessment: Unit test

Homework: Practice problems handout