# Mathematics Class Slides Bronx Early College Academy

Christopher J. Huson PhD

5-21 September 2019

- 1.1 First day of Geometry, 5 Sept
- 1.2 Drawing and construction tools, 6 Sept
- 1.3 Equilateral triangle construction, 9 Sept
- 1.4 Segment addition postulate, 10 Sept
- 1.5 Angle terminology, quiz review, 11 Sept
- 1.6 Angle terminology, quiz review, 12 Sept
- 1.7 Exam: Algebra, triangle construction, measurement, 13 Sept

GQ: How do we define the basic elements of geometry?

CCSS: HSG.CO.A.1 Know precise geometric definitions 1.1 Thursday 5 Sept

Welcome back to school

Do Now: Algebra skills check

- Assigned seating
- 2. Take out notebooks (or blank paper) & calculator (or \$20)
- 3. Complete Do Now handout

Supply list: Notebook, folder, looseleaf, pencils & pens, compass and ruler, calculator (due Monday)
Lesson: Measurement, drawing, geometric calculations
Homework: Algebra skills practice

# GQ: How do we construct geometric figures?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 1.2 Friday 6 Sept

### Do Now: Copy definitions into notebook

Lesson: Definitions: point, line, plane, ray, segment, end point, colinear, coplanar, congruent, distance or length, angle, vertex

Homework review

Practice compass use: "flower of life"

Calculator deposits \$20

Homework: Problem set 1-2 Vocabulary and terminology

# GQ: How do we construct an equilateral triangle?

CCSS: HSG.CO.D.13 Construct an equilateral triangle 1.

1.3 Monday 9 Sept

### Do Now: x = 0 vs y = 0. Copy into notebook, do problems

- 1. x = 0, starting point, y-intercept, b, initial condition, f(0)
- 2. y = 0, x-intercept, the solution, the zeros, f(x) = 0

Lesson: Circle notation; "Sketch", "draw", "construct"; "Given"

#### Euclid's first construction

- 1. Steps in the construction
- 2. Logic: Why does it work?
- MLA headings: First+Last Name / Dr. Huson 10.x Geometry / 9 September 2019
- 4. Assessment criteria: precision, correct & complete, elegance Homework: Measurement, terminology, and algebra practice Due: Compass, ruler, protractor, calculator

### GQ: How do we measure distance?

CCSS: HSG.CO.D.12 Congruence, Make geometric constructions 1.4 Tuesday 10 Sept

### Do Now: Construct an equilateral triangle

- 1. Do the construction and list the steps
- MLA headings: First+Last Name / Dr. Huson 10.x Geometry / 10 September 2019
- 3. Project quality: these will be graded and posted!
- 4. Assessment criteria: complete & correct, aesthetics

Lesson: Area and perimeter formulas, opposite rays, intersection Segment addition postulate (classwork handout) (Midpoint, bisector)

Homework: Distance algebra problems

# A step-by-step guide to solving geometry problems

Segment addition postulate

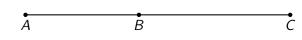
Given  $\overline{ABC}$ , AB = 3x - 7, BC = x + 5, AC = 14. Find AB.

# A step-by-step guide to solving geometry problems

Segment addition postulate

1.4 Tuesday 10 Sept

Given  $\overline{ABC}$ , AB = 3x - 7, BC = x + 5, AC = 14. Find AB.



- 1. Sketch and label the situation
- 2. Write a geometric equation
- 3. Substitute algebraic values
- 4. Solve for the unknown
- 5. Answer the question
- 6. Check your answer

# GQ: How do we measure angles?

CCSS: HSG.CO.A.1 Know precise geometric definitions

1.5 Wednesday 11 Sept

### Do Now: How big is a football field?

- 1. On lined scrap paper, calculate the area of a football field
- 2. 100 yards long,  $53\frac{1}{3}$  yards wide
- 3. What is the area of the end zone? (10 yards deep)
- 4. Spicy: What is the area in square feet?

Lesson: Measuring angles, making angles of a given measure Angle terminology: legs, vertex, interior, exterior, right, acute, obtuse; adjacent, opposite or vertical angles

Homework: Pretest handout, Test Friday

### GQ: How do we measure angles?

CCSS: HSG.CO.A.1 Know precise geometric definitions

1.6 Thursday 12 Sept

### Do Now handout

- 1. Measuring angles
- 2. Protractor use
- 3. Making angles of a given measure

Angle terminology: legs, vertex, interior, exterior, right, acute, obtuse

Review for test tomorrow

Homework: Study for test

GQ: How do we get started with geometry?

CCSS: HSG.CO.A.1 Know precise geometric definitions 1.7 Friday 13 Sept

### Test: Introduction to geometry

- 1. Terminology and notation
- 2. Equilateral triangle construction
- 3. Measuring length and angles
- 4. Algebra review

Homework: Angle measure algebra problems