# Mathematics Class Slides Bronx Early College Academy

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5-21 September 2019

- BECA / Dr. Huson / Geometry Unit 1

  1.1 First day of Geometry 5 Sept

  1.2 Drawing and construction tools 6 Sept

  1.3 Drui
  - 1.4 Drui
  - 1.5 Drui
  - 1.6 Drui

1.7 Drui

- 1.8 Drui Tuesday Sept 18
- 1.9 Drui Thursday Sept 20
  - 1.10 Drui Friday Sept 21

# 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

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

Segment addition postulate (classwork handout)

Early finishers: How should the papers be handed in to be in order?

Homework: Problem set 1-1 Vocabulary and terminology

## GQ: How do we construct geometric figures?

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

Do Now: Problems 75-80 pg 19

Homework review Riddle on page 3

Lesson: Opposite rays, intersection, p. 13-15

Project: Introduction to compass use

Calculator deposits \$20

Homework: Algebra skills assessment

# GQ: How do we construct an equilateral triangle?

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

1.2 Friday 6 Sept

## Do Now Quiz

1. Notation and terminology

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

Fuclid's first construction

- 1. Steps in the construction
- 2. Logic: Why does it work?
- 3. Assessment criteria: precision, correct & complete, elegance or beauty

Homework: Geometry and algebra practice Due: notebook, folder, compass, ruler, protractor, calculator

## GQ: How do we work in three dimensions?

CCSS: HSG.CO.A.1 Know precise geometric definitions 1.2 Friday 6 Sept

#### Do Now: I have a compass, notebook, and calculator

- Tools checklist.
- 2. Notation
- 3. Segment addition, absolute value
- 4. Equilateral triangle construction What is the actual measured length of *DE*? (in centimeters)

Plane geometry pp. 14-17 Problems #1-20 p.16

Homework: Pre-quiz geometry and algebra practice Construction project due Friday (hexagon challenge)

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

Segment addition postulate

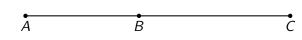
Given  $\overline{ABC}$ , AB = 3x - 7, BC = x + 5, AC = 14. Find AB.

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

Segment addition postulate

1.2 Friday 6 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 distance?

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

### Do Now: I have a ruler and protractor

- 1. Plane geometry
- 2. Measure lengths

Midpoint, bisector, step-by-step solving distance algebra Problems pp. 20-24, #1-5, 8-20

Homework: Distance algebra problems, challenge p. 26 Construction project due tomorrow (hexagon challenge)

## GQ: How do we measure angles?

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

1.2 Friday 6 Sept

## Do Now quiz - Project due

- 1. Notation
- 2. Segment addition, absolute value
- 3. Equilateral triangle construction

Angle terminology, types; protractor use pp. 27-29 Problems #1-20 (odds) p.31

Homework: Angle notation

# GQ: How do we add angle measures?

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

1.2 Friday 6 Sept

#### Do Now: Practice and review

- 1. Segment addition problem
- 2. Equilateral triangle construction
- 3. Segment replication

Review common errors of Friday's Do Now Quiz Angle addition postulate pp. 30-32 Classwork problems 7-23 odds pp. 31-32

Homework: Angle measure algebra problems
Parent-teacher meeting tomorrow 4:30-7:30 Participation credit!

# GQ: How do we solve bisector problems?

CCSS: HSG.GPE.B.6 Find the midpoint of a segment

1.2 Friday 6 Sept

## Do Now: Practice, construction

- 1. Use your protractor and ruler to measure and draw.
- 2. Use your compass and straightedge to construct an equilateral triangle.

Congruence situations versus addition situations Angle bisectors

Homework: Pre-test

Parent-teacher meeting tomorrow 4:30-7:30 Participation credit!

GQ: How do we use the tools of geometry?

CCSS: HSG.CO.A.1 Know precise geometric definitions 1.2 Friday 6 Sept

Do Now: Angle measure practice, construction

1. Use your protractor, ruler, and compass

Test review

Homework: Study for test

GQ: How do we use the tools of geometry?

CCSS: HSG.CO.A.1 Know precise geometric definitions 1.2 Friday 6 Sept

Do Now: (Test)

Test

Homework: Angle measure algebra problems