# Mathematics Class Slides Bronx Early College Academy

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26 November 2018

- BECA / Dr. Huson / Geometry Unit 3
  - 4.1 Project: Triangle congruence project, Monday 26 November
  - 4.1 Drui: Triangle congruence. Monday 26 November
  - 4.2 Drui: Deltamath. Tuesday 27 November
  - 4.3 Drui: Triangle proofs. Wednesday 28 November
  - 4.4 Drui: Pretest review. Thursday 29 November
  - 4.5 Drui: Exam. Friday 30 November
  - 4.6 Drui: Translations Monday December 3
  - 4.7 Deltamath Translations Tuesday December 4
  - 4.8 Drui: Translations Wednesday December 5
  - 4.9 Drui: Reflections Thursday December 6

## Construction project: Triangle congruence

CCSS: HSG.CO.C.9 Prove geometric theorems

4.1

#### Four pages of $\triangle$ duplication constructions for binder

- 1. Side-side-side (SSS)
- 2. Side-angle-side (SAS)
- 3. Angle-side-angle (ASA)
- 4. Side-side-angle (SSA), false, "ambiguous case"

#### Grading criteria (20 points)

- 1. Complete and correct construction
- 2. State postulate or theorem. (written steps not necessary)
- 3. MLA header, center title & last name on right
- 4. Precise, elegant, mathematical aesthetic

#### Due Friday November 30

## GQ: How do we construct congruent triangles?

CCSS: HSG.CO.C.9 Prove geometric theorems 4.1 Monday 26 November

#### Do Now:

- 1. Trig review problems handout
- 2.  $+, \triangle$  What is working? What would you change?

Seating chart 2nd trimester norms and expectations  $\triangle$  congruence construction project, SSS Homework packet review, trig problems

Homework: Distance, midpoint, and slope review, handout Parent-teacher conferences Thursday & Friday

# GQ: How do we use trigonometric ratios?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.2 Tuesday 27 November

#### Do Now: SAS $\triangle$ congruence

- 1. Duplicate a side, duplicate an angle, duplicate a side.
- 2. Angle must be the *included* angle, between the two sides
- 3.  $\triangle ABC \cong \triangle A'B'C'$  iff  $\overline{AB} \cong \overline{A'B'}, \angle A \cong \angle A', \text{ and } \overline{AC} \cong \overline{A'C'}$

Geogegra intro (?)

Deltamath assessment: distance, midpoint, and slope Deltamath homework: trig ratios, triangle relationships

Homework: Complete deltamath (10pm deadline) Parent-teacher conferences Thursday & Friday

# GQ: How do we prove triangles congruent?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.3 Wednesday 28 November

Do Now: Theorems review handout Triangle sum, transversal, vertical

### Angle-side-angle (ASA) $\triangle$ congruence

- 1. Duplicate an angle, duplicate a side, duplicate an angle
- 2.  $\triangle ABC \cong \triangle A'B'C'$  iff  $\angle A \cong \angle A'$ ,  $\overline{AB} \cong \overline{A'B'}$ , and  $\angle B \cong \angle B'$

#### Lesson:

Triangle congruence proofs

Assessment: distance, midpoint, and slope

Homework: Pretest packet. Test Friday

GQ: How do we prove triangles congruent?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.4 Thursday 29 November

Do Now: Triangle congruence practice handout

SSA  $\triangle$  congruence (or ASS, "jack ass theorem")

- 1. Duplicate an angle, duplicate a side, duplicate an side
- 2. Given  $\triangle ABC$  if  $\angle A \cong \angle A'$ ,  $\overline{AB} \cong \overline{A'B'}$ , and  $\overline{BC} \cong \overline{B'C'}$  then two possible  $\triangle$ s may result.

Lesson:

Review problems for take home test

Homework: Complete  $\triangle \cong$  project due tomorrow

## GQ: How do we prove triangles congruent?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.5 Friday 30 November

Review for unit exam

Triangle congruence project due

Homework: Take home test

GQ: How do we translate the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.6 Monday December 3

Transformations, translations Hexagon (& square) construction project due Friday

Homework: Hexagon construction

GQ: How do we translate the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.7 Tuesday December 4

## HL Triangle congruence

Deltamath classwork: Transformations, translations, hexagon construction

Homework: Deltamath homework package

## GQ: How do we translate the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.8 Wednesday December 5

Triangle congruence handout. Problem #1 Spicy: keep going!

Hint: use theorems from transversals and parallel lines

Triangle congruence proofs
Square construction
Rigid motion, pre-image→image, compositions. pp. 545-550

Homework: Congruence handout

GQ: How do we reflect objects on the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.9 Thursday December 6

Triangle congruence handout. Problem #1 Spicy: keep going!

Paper folding activity Reflection across a line. pp. 554-557

Homework: Congruence handout