

# Mathematics Class Slides

## Bronx Early College Academy

Chris Huson

26 November 2018

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

4.10 Drui: Rotation Friday December 7

4.11 Drui: Dilation Monday December 10

4.12 Deltamath Translations Tuesday December 11

4.13 Drui: Dilation Wednesday December 12

4.14 Drui: Dilation Thursday December 13

4.15 Deltamath Review Friday December 14

## 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  
 $\overline{AB} \cong \overline{A'B'}$ ,  $\angle A \cong \angle A'$ , and  $\overline{AC} \cong \overline{A'C'}$

Geogebra 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  $\rightarrow$  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, translation handout.

Constructing the line of reflection given pre-image→image  
Reflection across a line, orientation. pp. 554-557

Homework: Congruence handout

## GQ: How do we rotate objects on the plane?

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

4.10 Friday December 7

Triangle congruence, transformation handout.

Center and angle of rotation mapping pre-image→image  
pp. 561-567

Homework: Congruence, transformation handout

## GQ: How do we dilate objects on the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.11 Monday December 10

Triangle congruence, transformation handout.

Center of dilation and scale factor mapping pre-image  $\rightarrow$  image  
pp. 587-591

Test Thursday

Homework: Pretest handout

## GQ: How do we translate the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.12 Tuesday December 11

Area formulas: triangle, semi-circle

Deltamath classwork: Transformations, square construction

Test Thursday

Homework: Deltamath homework package

## GQ: How do we dilate objects on the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.13 Wednesday December 12

Triangle congruence, transformation handout.

Review for test

Test Tomorrow

Homework: Study for test



## GQ: How do we dilate objects on the plane?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 4.14 Thursday December 13

Test

Homework: Review packet, due Monday Room 450

(Intensives daily homework)

## GQ: How do we translate the plane?

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

4.15 Friday December 14

Intensives daily homework protocol

Deltamath classwork: Holiday review

Homework: Deltamath homework package