

# 10th Grade Geometry - Unit 6: Similarity

Bronx Early College Academy

Christopher J. Huson PhD

4 January 2019

6.1 Drui: Algebra literals review. Friday 4 January

6.2 Drui: Dilation introduction. Monday 7 January

6.2 Project: Transformations project, Monday 7 January

6.3 Drui: Deltamath. Tuesday 8 January

6.4 Drui: Dilation construction, ratios. Wednesday 9 January

6.5 Drui: Triangle similarity leg calcs, midline. Thursday 10 Jan

6.6 Drui: Trig similarity. Friday 11 January

6.7 Drui: Trig inverse function. Monday 14 January

6.8 Drui: Deltamath. Tuesday 15 January

6.9 Drui: Regents review. Wednesday 16 January

6.10 Drui: Exam. Thursday 17 January

6.11 Drui: Regents review. Friday 18 January

## GQ: How do we solve for an unknown?

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

6.1 Friday 4 January

Do Now: Handout with algebra problems

1. Trig applications
2. Area and volume applications

Exam review. Test corrections due Monday  
Solving an equation for an unknown

Homework: Trig, area, and volume applications, handout

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

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

6.2 Monday 7 January

### Do Now: Handout

1. Triangle congruence, reflection handout; Perpendicular bisector construction. Orientation.

Test corrections due; Construction project due Friday

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

Homework: Dilation exercises, handout

## Construction project: Transformations

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

6.2

Three pages of transformation constructions for binder

1. Double a line segment
2. Construct the line of reflection
3. Construct a dilation

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 January 11

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

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

6.3 Tuesday 8 January

### Do Now: Handout

1. Construction handout

Deltamath assessment: dilation, reflections

Deltamath homework: Algebra literals, ratios, radians (10pm deadline)

## GQ: How do we use scale factors to calculate dilated lengths?

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

6.4 Wednesday 9 January

### Do Now: Handout

1. Duplicate a segment, double a segment handout

Dilation construction, on coordinate plane, ratios

Homework: Multiple choice exercises, handout

Take-home test Friday (Multiple choice)

## GQ: How do we define *similar* objects?

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

6.5 Thursday 10 January

### Do Now: Handout

1. Triangle proof with reflexive property handout

Review homework (gradecam scores)

Similarity, triangle dilations and midline/parallels situations

Homework: Similar triangles exercises, handout

Take-home test tomorrow (Multiple choice)



## GQ: How do we understand trig ratios as similarity ratios?

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

6.6 Friday 11 January

### Do Now: Handout

1. Midline triangle problems handout

Right triangle dilation situations, trig

Homework: Take-home test (Multiple choice)

## GQ: How do we solve for a triangle angle measure?

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

6.7 Monday 14 January

### Do Now: Handout

1. Trig triangle problems handout

Take-home test due

Project: Regents construction packet. Due Thursday.

Inverse trig functions

Homework: Trig practice

## GQ: How do we solve for a triangle angle measure?

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

6.8 Tuesday 15 January

### Do Now: Handout

1. Proof handout

Test corrections due Thursday

Deltamath assessment: Inverse trig functions

Deltamath homework: Trig problems (10pm deadline)

Test Thursday

## GQ: How do we apply the mathematics of geometry?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 6.9 Wednesday 16 January

### Do Now: Handout

1. Triangle proof problems handout

Regents construction packet due tomorrow.

Regents review

Homework: Study for test

## GQ: How do we apply the mathematics of geometry?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 6.10 Thursday 17 January

### Exam, Regents "lite"

1. Triangle proof problems handout

Regents construction packet due.

Homework: Review problems

## GQ: How do we apply the mathematics of geometry?

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

6.11 Friday 18 January

### Do Now: Handout

1. Test review problems

Regents review

Homework: Study for Regents