

# 10th Grade Geometry - Unit 6: Similarity

Bronx Early College Academy

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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: Similarity ratio problems, centroid/median theorem.  
Monday 14 January

6.8 Drui: Deltamath. Tuesday 15 January

6.9 Drui: Regents review. Wednesday 16 January

6.10 Drui: Regents review - Trig. Thursday 17 January

6.11 Drui: Regents review. Friday 18 January

6.12 Laptops - Geogebra. Tuesday 28 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, midline, triangle ratios

Homework: Take-home test, due tomorrow

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

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

6.5 Thursday 10 January

### Do Now: Handout

1. Early finishers Constructions: Dilation, line of reflection; midpoint

Right triangle dilation situations, trig

Homework: Construction project due



## 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

Constructions due: Dilate triangle, line of reflection; midline (spicy)

Similarity, triangle dilations and midline/parallels situations

Homework: Regents packet, complete 6 multiple choice (+3 spicy)  
& 6 free response

## GQ: How do we solve similar triangles?

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

6.7 Monday 14 January

### Do Now: Handout

1. Regents constructions (pre-test)

Review take-home Regents questions

Project: Regents construction packet. Due Thursday.

Similarity ratio problems, centroid/median theorem

Homework: 6-7 Similar triangles 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 Quiz: Handout Regents constructions

1. Preview two new Regents constructions: Aug 2017 #28, 29  
(early finishers #27 and Jan 2018 #30)

Deltamath assessment: Similarity, trig functions

Homework: 6-8 Similar triangle ratio problems

## 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 Regents constructions

1. Preview two new Regents constructions: June 2017 #25

Regents review

Homework: Handout

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

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

### Do Now: Handout Regents constructions

1. Preview two new Regents constructions: June 2017 #25

Regents review

Homework: Handout Multiple Choice Regents 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 Regents constructions

1. Transformations problems

Regents review

Homework: Study for Regents

## GQ: How do we model with digital tools?

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

6.11 Friday 18 January

### Do Now: Regents review and reflection

- ▶ Results: 10 passing scores, 4 college ready
- ▶ Top score 75; average 53
- ▶ 70% earned free response points

### GeoGebra Geometry App

Enter **P9PNZ** on [www.geogebra.org/groups](http://www.geogebra.org/groups) to join class

Set up account using your real name.

Beginner Tutorials with Lesson Ideas

Author: Tim Brzezinski

Homework: Complete Geogebra