

Mathematics Class Slides

Bronx Early College Academy

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2 January 2020

7.1 Dilation calculations of triangle, Thursday 2 January

7.2 Dilation calculations of triangle, Friday 3 January

7.3 Dilation calculations of triangle, Monday 6 January

7.4 Laptop: Geogebra triangle reflection+dilation, Tuesday 7 January

7.5 Transformational symmetries, Wednesday 8 January

GQ: How do we calculate the lengths of \triangle s under dilation?

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

7.1 Thursday 2 January

Do Now: Exam review

- ▶ Dilate a given triangle with scale factor
- ▶ Applying dilations on the coordinate plane
- ▶ The parameter m in a function $f(x) = mx + b$
- ▶ Isosceles triangle review
- ▶ Graph peer grading

Lesson: Dilation and the properties of similar figures, notation

Homework: Complete problem set (Portfolio binder extra credit Monday)

GQ: How do we use equations to solve geometry problems?

CCSS: HSG.GPE Express geometric properties with equations

7.2 Friday 3 January

Do Now: Applying the tangent function

1. Calculate the tangent of an angle using a calculator
2. Calculate the tangent of an angle given a slope, or \triangle side lengths
3. Solving for the a triangle's sides given a vertex angle measure
4. Inverse function on the calculator $\tan^{-1}(x)$

Lesson: Review of problems using coordinate geometry

Homework: Complete problem set (Portfolio binder extra credit Monday)

GQ: How do we use equations to solve geometry problems?

CCSS: HSG.GPE Express geometric properties with equations 7.3 Monday 6 January

Do Now: Applying the tangent function

1. Calculate the tangent of an angle using a calculator
2. Calculate the tangent of an angle given a slope, or \triangle side lengths
3. Solving for the a triangle's sides given a vertex angle measure
4. Inverse function on the calculator $\tan^{-1}(x)$

Test corrections due. Portfolio binder review for extra credit

Lesson: Angle-angle similarity theorem, the reflexive property

Homework: Complete problem set

GQ: How do we communicate examples of compositions?

CCSS: HSG.GPE Express geometric properties with equations 7.4 Tuesday 7 January

Project: Reflection and dilation composition of a \triangle

1. Use Geogebra & MS Word to write a 1+ page paper
2. Perform the following operations:
 - 2.1 Bisect the angle of one vertex of a triangle, $\triangle ABC$
 - 2.2 Reflect $\triangle ABC$ across the bisector, creating image $\triangle A'B'C'$
 - 2.3 Dilate the image, $\triangle A'B'C' \rightarrow A''B''C''$
3. In the text, describe your steps, the mappings and congruences.
4. Use proper notation and the equation editor. Follow MLA.
5. Email a pdf file, subject line: Dilation composition assignment

Homework: Complete exploration paper (10:00 deadline)

GQ: How do we transform a figure onto itself?

CCSS: HSG.GPE Express geometric properties with equations 7.5 Wednesday 8 January

Do Now: Dilation situations

1. Ratio calculations
2. Corresponding angles and polygon sides
3. Transformation composition

Lesson: Symmetry as transformations “onto itself”

Homework: Transformations problem set (Test Friday)