10th Grade Geometry - Unit 13: Regents Review

Bronx Early College Academy

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13.1 Scale & applications of dilation Tuesday 28 May

13.2 Similarity review Wednesday 29 May

13.3 Constructions Thursday 30 May

13.4 Constructions, Similarity quiz Friday 31 May

13.5 Slope review Wednesday 5 June

13.6 Similarity review Friday 7 June

13.7 Transformations review Monday 10 June

13.8 Distance review Tuesday 11 June

GQ: How do we use scale factors?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.1 Tuesday 28 May

Do Now: Handout

1. Using scale factors
2. Real world situations

Guest teacher, Mr. Segal. Applications of scale factors in finance.

Homework: Problem set, test corrections due Thursday

GQ: How do we use scale factors?

Triangle similarity: for your notebook

Given

$$\triangle ABC \sim \triangle DEF$$

Equivalently

$$\triangle ABC \to \triangle DEF$$

Complete the three line segment correspondences, three scale factor ratios, & three dilations.

1. $\overline{AB} \to \overline{DE}$
2. $\overline{BC} \to$
3. $\overline{AC} \to$

1. $k = \frac{DE}{AB}$
2. $k =$
3. $k =$

1. $DE = k \times AB$
2. $EF = k \times$
3. $DF = k \times$

What happens if $k = 1$?

GQ: How do we use scale factors?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.2 Wednesday 29 May

Do Now: Quadrilateral properties

1. Given a list of features, identify the applicable quadrilateral
2. Early finishers: Triangle congruency proofs

ASA proof of a parallelogram's congruent triangles, implications
Pretest packet: volume, trig, analytic geometry

GQ: How do we use scale factors?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.3 Thursday 30 May

Do Now: Similarity transformation

1. List what segments map to what segments
2. Find k as a ratio, apply it to each length.

Binder check
Classical constructions using compass & straightedge

Homework: Problem set

GQ: How do we use scale factors?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.4 Friday 31 May

Do Now handout: Constructions, dilation problems
Classwork review

Assessment: Exit quiz (& Binder check)

1. Angle bisector, perpendiculars constructions
2. Dilation situations
3. Similarity proof situations

Homework: Review packet;
Quiz corrections due Wednesday (pick up Monday)
Monday Regents review after History exam, Melrose Library

GQ: How do we apply slope calculations?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.5 Wednesday 5 June

Do Now: Handout

1. Duplicate a line segment & an angle
2. Parallel & perpendicular slopes

Circle equations

Assessment: Exit quiz covering slope applications
Review packet: Triangles, parallels, circle equations, intersections

Equations of circles in different forms

Use algebra, the distributive property

Take notes in your notebook

1. State the center & radius of $x^2 + (y-1)^2 = 25$
2. Write the equation of a circle centered at $(2, 3)$ with $r = 3$
3. True or false: $(x-2)^2 = x^2 - 4x + 4$?
4. Is $x^2 - 4x + y^2 = 5$ a circle?
5. Which equation represents a circle with center $(2, 3)$ & $r = 5$?

    5.1 $x^2 - 4x + y^2 - 6y = 25$

    5.2 $x^2 - 4x + y^2 - 6y = 12$

GQ: How do we calculate the measure of angles?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.6 Friday 7 June

Do Now: Angle measures

1. Vertical, supplementary, complementary angles
2. Triangle internal & external angles theorems
3. Parallel lines with transversals

Assessment: Exit quiz covering angle measure situations
It is your responsibility to complete projects and check Pupilpath
Review packet: Transformations

GQ: How do we transform objects to their image?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.7 Monday 10 June

Do Now: Transformations

1. Transformation, reflection, rotation, dilation
2. Symmetry & transformations onto itself
3. Segment partitions by a ratio
4. Cross sections

Assessment: Exit quiz covering transformations
Review packet: Transformations

GQ: How do we calculate distances?

CCSS: HSG.CO.D.12 Congruence, geometric constructions 13.8 Tuesday 11 June

Do Now: Distance

1. Pythagorean formula
2. Using distance in proof
3. Midpoint, midpoint extension
4. Slant length situations

Assessment: Exit quiz covering distance situations
Review packet: Circles & trigonometry