Mathematics Class Slides

Bronx Early College Academy

Chris Huson

18 October 2018

4.1 Transversals & parallel lines, 18 October

4.2 Sum of a triangle's internal angle measures is 180 degrees, 21 October

4.3 Laptops - Revision of angle bisector, 22 October

4.4 Sum of a polygon's internal angle measures, 23 October

4.5 Triangle and polygon external angle measures, radicals, 24 October

4.6 Laptops - Deltamath setup and Exit quiz, 25 October

4.7 Triangle and polygon external angle measures, radicals, 28 October

4.8 Laptop Project - Polygon angle sum table in Word, 29 October

GQ: How do we work with parallel lines?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.1 Friday 18 Oct

On scrap paper, practice constructions

1. A perpendicular through a point on a lines
2. Bisect an obtuse angle
3. Spicy: a hexagon (six adjacent equilateral triangles)

Review Khan Academy homework (worksheet homework makeup)
Lesson: Parallel lines crossed by a transverse line
Corresponding angles, alternate and same-side relationships

Axiom: corresponding angles are congruent when a transverse line intersects two parallels

Homework: Problem set 4-1 online Khan Academy

GQ: How do we calculate the sum of a $\triangle$'s internal angle measures?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.2 Monday 21 Oct

Exam followup

1. B bisects $\overline{AC}$ with $AB = 3x$, $AC = 24$. Diagram & solve.
2. A ray's end point is T. It extends through point P. Diagram & name using proper notation.
3. Dr. Huson commutes from 80th Street. At what street is he half way to BECA?
4. Exam early finishers problems

Review exam results; Test corrections due Friday
Peer review of angle bisector papers
Lesson: Sum of a triangle's internal angle measures is 180°

Homework: Problem set 4-2 Khan Academy complex angle situations

GQ: How do we construct an angle bisector?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.3 Tuesday 22 Oct

Laptops: Construct an angle bisector

1. Use Geogebra to construct an angle bisector
2. Write a short (one page) paper presenting your work
   - Use MS Word and follow MLA standards. (save as a template to the cloud)
   - What is the first step in your construction? What is its center?
   - How does Geogebra adjust the circles and rays as you move things around?

Early finishers: Khan Academy practice with parallel lines and triangles

Homework: Pretest problem set 4-3

GQ: How do we calculate the sum of a polygon's internal angle measures?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.4 Wednesday 23 Oct

Do Now: Area and perimeter, volume

- Area of a rectangle, parallelogram, and triangle
- Volume of a rectangular prism
- Solving for a missing dimension given the area or volume

Lesson: Polygons, the volume formula for a pyramid
Sum of a polygon's internal angle measures is $(n-2) \times 180^\circ$

Homework: Problem set 4-4 Khan Academy polygon internal angles

GQ: How do we work with square roots?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.5 Thursday 24 Oct

Do Now: angle measures in parallelogram and polygon situations

1. Triangle external angles
2. Consecutive internal angles of a parallelogram
3. Polygon external angles

Types of quadrilaterals, area of a trapezoid
Triangle inequality theorem
Lesson: simplifying radicals, rounding

Test corrections due tomorrow
Homework: 4-5 Khan Academy Triangle side length rules

GQ: How do we communicate patterns polygons follow?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.6 Friday Oct

Online Deltamath practice: Khan Academy assignment

1. Complete assignments in order (1-5 problems each standard)
2. Show work on lined paper, to be handed in
3. Early finishers: make up Khan Academy assignments, projects

www.Deltamath.com Teacher ID 546068

Exit Pop Quiz: Deltamath (10 minutes)

Homework: Problem set 4-6 Khan Academy review problems

GQ: How do we construct parallel lines?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.7 Monday 28 Oct

Do Now: angle measures in parallelograms & polygons

1. Triangle external angles
2. Consecutive internal angles of a parallelogram
3. Polygon internal angles

Lesson: Construction handout: duplicate a segment, angle
Construction of a parallel line through a point
Inserting a table in Microsoft Word

Homework: 4-7 handout, Triangle angle sum situations

Proportion and scale factors (k)

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.7 Monday 28 Oct

Classwork: Work these problems in your notebook using algebraic notation

1. Dr. Huson's commute is 84 blocks. How long is 75% of his ride?
2. An ivy plant is 3 inches long. If it triples in length over the month of November, how long will it be?
3. A water tank in the shape of a prism is 20 cm long, 10 cm deep, & 15 cm tall. How much water does it hold if it is 80% full? (1 milliliter = 1 cubic centimeter)
4. The segment $\overline{AB}$ is doubled in length to make $\overline{ABC}$. If $AC = 6.4$, find AB.

GQ: How do we communicate patterns polygons follow?

CCSS: HSG.CO.A.1 Know precise geometric definitions 4.8 Tuesday Oct

Do Now Quiz: Khan Academy assignment

1. Assignment: Quiz #2 & Quiz #3
2. Show work on lined paper, hand in

Project: Investigate polygon internal angles
Write a paper, including a table of the sum of the measures of internal angles versus number of sides of a polygon

Homework: Problem set 4-8