

# Mathematics Class Slides

Bronx Early College Academy

Chris Huson

2 October 2018

3.1 Volume formula, vertical angle congruence, 2 October

3.2 Angle bisectors, construction, 3 October

High School MAP math testing, 4 October

3.3 Area of a parallelogram, 7 October

3.4 Laptop construction paper makeup, 8 October

3.5 Sum of a triangle's internal angle measures is 180 degrees, 10 October

3.6 Transversals & parallel lines, 11 October

3.7 Laptops, 15 October

3.8 Review for unit exam, 16 October

3.9 Unit exam, 17 October

## GQ: How do we calculate the volume of a prism?

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

3.1 Wednesday 2 Oct

### Do Now: Angle terminology

1. Adjacent & non-adjacent angles
2. Complementary & supplementary angles (perpendicular)
3. Vertical angles
4. Organizing the work for a solution

Lesson: Definitions: prism, base, face, edge

Test corrections / analysis

Theorem: Vertical angles are congruent; classwork practice

Homework: Problem set 3-1

## GQ: How do we construct the bisector of a given angle?

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

3.2 Thursday 3 Oct

### Do Now: Area and volume practice

1. Area of a rectangle, square, and triangle
2. Solving for a unknown parameter
3. Prism volume calculation, solving for unknown
4. Vertical angle situations

Lesson: Angle bisectors

Construct the bisector of an angle

Homework: Problem set 3-2

## GQ: How do we calculate the area of a parallelogram?

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

3.3 Monday 7 Oct

### Do Now: Area and volume practice

1. Construct a perpendicular through a point
2. Volume and the area of a compound shape
3. Vertical, supplementary, and complementary angles

Lesson: The area of a parallelogram  $A = bh$

Solving angle bisector problems

Homework: Problem set 3-3

## GQ: How do we calculate the area of a parallelogram?

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

3.4 Tuesday 8 Oct

Check Pupilpath and complete missing assignments

1. Projects: hand construction of equilateral triangle
2. Geogebra construction of equilateral triangle
3. MS Word paper with four constructions
4. email to husonbeca@gmail.com

Lesson: Using KhanAcademy to practice Geometry

Teacher: DrHuson, Class code: MPFQ83

Homework: Online Khan assignment

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

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

3.5 Thursday 10 Oct

### Angle situations

1. Model each situation. You do not need to solve the equation, but circle where it states what to solve for.
2. Three angles are supplementary
3. Model area leading to a quadratic equation
4. Use the properties of radii of a circle

Lesson: Sum of a triangle's internal angle measures is  $180^\circ$

Homework: Problem set 3-5

## GQ: How do we work with parallel lines?

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

3.6 Friday 11 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)

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 3-6 online Khan Academy



## GQ: How do we construct an angle bisector?

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

3.7 Tuesday 15 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

Homework: Pretest problem set 3-7

## GQ: How do we work with angle bisectors and volumes?

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

3.8 Wednesday 16 Oct

### Do Now: Modeling practice

1. Segment addition and segment bisectors
2. Angle bisectors, complementary and supplementary situations
3. Early finishers: constructions (equilateral triangle, segment bisector, angle bisector, perpendicular through a point)

Roundtable: Review for test tomorrow

Note: Any three points are coplanar

Homework: Problem set 3-8

## GQ: How do we work with angle bisectors and volumes?

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

3.9 Thursday 17 Oct

Assessment: Unit exam, Volumes and angle bisectors

Homework: Problem set 3-9, parallel lines crossed by a transversal