Mathematics Class Slides

Bronx Early College Academy

Chris Huson

28 January 2020

8.1 Circle and volume formulas, Tuesday 28 January

8.2 Estimating, measuring, scale models, Wednesday 29 January

8.3 Density, Thursday 30 January

8.4 Equation of a circle, Friday 31 January

8.5 Cross sections in 3-dimensions, Monday 3 February

8.6 Rotations in 3-dimensions, Cross sections, Tuesday 4 February

8.7 Review for unit test, Wednesday 5 February

8.8 Exam: areas, circles, volumes, Thursday 6 February

8.9 Calculator circle equations, Friday 7 February

8.10 Calculator circle equations, Monday 10 February

8.11 Compound volume situations, Wednesday 12 February

8.11 Compound volume situations, Wednesday 12 February

GQ: How do we calculate the area and circumference of a circle?

CCSS: HSG.GMD.A1 Circle formulas for circumference and area 8.1 Tuesday 28 January

Do Now: Area and volume problems

- Area of triangles and parallelograms
- Volume formula practice
- Circle area and circumference
- Circle vocabulary

Lesson: Circle formulas & terminology;
Solids formula notation (start with a label variable, A, V, C, P)

Homework: Review reference sheets; Deltamath

GQ: How do we estimate and work with appropriate precision?

CCSS: HSG.SRT.GMD.A3 Use volume formulas to solve problems 8.2 Wednesday 29 January

Do Now: Area and volume problems

- Circle area and circumference
- Volume formula practice
- Circle vocabulary

Lesson: Scale drawings; Counting squares to estimate area, rounding
Compound shapes

Homework: Khan Academy volume review and introduction to density (watch video)

GQ: How do we apply density ratios to calculate weight?

CCSS: HSG.MG.A2 Apply concepts of density to model 8.3 Thursday 30 January

Do Now: Estimating and rounding problems

- Scale drawing problems
- Area and volume formula practice
- Solving in terms of π and rounding
- Compound shapes

Lesson: Density ratios, unit changes, cost calculations

Homework: Khan Academy

GQ: How do we define a circle using analytic geometry?

CCSS: HSG.GPE.A1 Equation of a circle of given center and radius 8.4 Friday 31 January

Do Now Quiz: Area and volume problems

Classwork counts double while Dr. Huson is out!

- Circle vocabulary
- Area and volume formula practice
- Solving in terms of π and rounding
- Compound shapes

Lesson: Equation of a circle $(x-a)^2+(y-b)^2=r^2$

Homework: Deltamath due Sunday 10:00pm

GQ: How do we imagine objects 3-dimensions?

CCSS: HSG.SRT.GMD.A3 Use volume formulas to solve problems 8.5 Monday 3 February

Do Now: Area and volume problems

Classwork counts double while Dr. Huson is out!

- Circle and sector areas
- Area and volume formula practice
- Equation of a circle

Lesson: Cross sections in 3-dimensions

Homework: Complete solids and cross sections handout.

GQ: How do we imagine a figure rotated in space?

CCSS: HSG.SRT.GMD.A3 Use volume formulas to solve problems 8.6 Tuesday 4 February

Do Now: Circle problems

- Circle equations, the distance formula
- Area and volume formula practice
- Volume and density application

Lesson: Rotations in 3-dimensions, Cross sections

Homework: Handout area, volume, and density problems

GQ: How do we calculate area and volume?

CCSS: HSG.SRT.GMD.A3 Use volume formulas to solve problems 8.7 Wednesday 5 February

Do Now: Circle problems

- Algebra practice
- Area and volume formula practice
- Volume and density application

Lesson: Review for unit exam

Homework: Handout review problems, study for Test Tomorrow

GQ: How do we calculate area and volume?

CCSS: HSG.SRT.GMD.A3 Use volume formulas to solve problems 8.8 Thursday 6 February

Unit test: Area & volume

- Circle terminology, sectors
- Area and volume formulas
- Volume and density applications

Homework: Deltamath due 10:00pm

GQ: How do we define a circle with an equation?

CCSS: HSG.GPE.A1 Equation of a circle of given center and radius 8.9 Friday 7 February

Do Now: Circle problems

- Circle equations, the distance formula
- Algebra practice

Lesson: Calculator graphing equation of a circle
$(x-a)^2+(y-b)^2=r^2 \rightarrow x^2-2ax+y^2-2by=r^2-a^2-b^2$

Homework: Deltamath due 10:00pm Sunday

GQ: How do we define a circle with an equation?

CCSS: HSG.GPE.A1 Equation of a circle of given center and radius 8.10 Monday 10 February

Do Now: Find the circle center and radius using a calculator

1. $x^2 - 6x + y^2 + 10y = -18$
2. $x^2 + y^2 + 14x - 2y = 14$

Lesson: Compound solid shapes

Homework: Deltamath due 10:00pm Tuesday

GQ: How do we combine solids?

CCSS: HSG.GPE.A1 Equation of a circle of given center and radius 8.11 Wednesday 12 February

Do Now: Circle problems

- Circle equations, the distance formula
- Algebra practice

Lesson: Water tank volume problems

Homework: Deltamath due 10:00pm

Do Now: Combine the areas of figures

CCSS: HSG.GPE.A1 Equation of a circle of given center, radius 8.11 Wednesday 12 Feb

- Copy definition: slant height - the diagonal length of a triangle, cone, or pyramid
- Find the area of the figure (triangle+rectangle+semi-circle)