

Mathematics Class Slides

Bronx Early College Academy

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5-21 September 2018

GQ: How do we define functions?

CCSS: HSF.IF.C.7 Analyze functions

1.1 Thursday 5 Sept

Do Now Handout: Algebra skills check

1. Welcome back to school!
2. Assigned seating: arrange yourself alphabetically by last name, left to right, front to back.
3. Take out notebooks (or blank paper) & calculator
4. Complete handout problem set

Lesson: Linear functions, slope, solving; vertical line test p 4-6

Homework: Problem set: Function identification 1A & 1B p. 6-7

GQ: What are domain and range?

CCSS: HSF.IF.C.7 Analyze functions

1.2 Friday 6 Sept

Do Now: Substitution notation

1. Handout, IB exam problem
2. Challenge: Verify the following Pythagorean identity for all values of x and y :

$$(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$$

Homework review

Lesson: Domain, range, function review

Calculator deposits \$20

Homework: Polynomial simplification, graphing linear functions

Due: notebook, folder, calculator

GQ: What is the appropriate precision for a calculation?

CCSS: MP5 Attend to precision

1.3 Monday 9 Sept

Do Now: Textbook chapter warmup, use looseleaf paper

1. Skills check #1-3 p. 3

Lesson: Rounding, significant figures, error bars pp. 1-5

Exercise 1A, #1-2, p. 5

Homework: Calculation and rounding practice

GQ: How do we measure the bounds of errors?

CCSS: MP5 attend to precision

1.4 Tuesday 10 Sept

Do Now: Calculator practice

1. Chapter review #1 p. 39
2. Pay careful attention to saving calculator values, rather than copying to paper and reentering.
3. Check your answers in back of book, p. 766

Lesson: Bounds and errors pp. 6-8

Practice exercises 1B p. 8-9

Homework: Function substitution, domain and range

GQ: How do we write very large or small numbers?

CCSS: MP5 attend to precision

1.5 Wednesday 11 Sept

Do Now: Precision practice

1. Practice exercises 1B p. 8-9
2. Pay careful attention to saving calculator values, rather than copying to paper and reentering.
3. Check your answers in back of book, p. 765

Lesson: Exponents & scientific notation pp. 9-12

Note exponent rules top of page 11

Homework: Practice exercises 1C p. 12-13

GQ: How do we calculate the side lengths of a right triangle?

CCSS: MP5 attend to precision

1.6 Thursday 11 Sept

Do Now: Precision practice

1. Chapter review #2 p. 39
2. Which will be easier to use, scientific notation or the fully expanded number?
3. Use proper notation to display your answer clearly

Homework review

Lesson: Right triangle trigonometry pp. 13-15

Angle of elevation and depression page 11

Homework: Practice exercises 1D p. 16-17

GQ: How do we calculate the side lengths of a non-right triangle?

CCSS: MP5 attend to precision

1.7 Friday 13 Sept

Do Now: Precision practice

1. Chapter review #3 p. 39
2. Learn how to use the calculator to solve an equation.
(multiple methods)

Lesson: Non-right triangles and the sine rule pp. 17-21

The ambiguous case page 21

Homework: Practice exercises 1E p. 21-22

GQ: How do we calculate the area of a triangle?

CCSS: MP5 attend to precision

1.8 Monday 16 Sept

Do Now: Precision practice

1. Chapter review #4b p. 39
2. Note that both $\frac{15}{\sin 31} = \frac{13.4}{\sin R}$ and $\frac{\sin 31}{15} = \frac{\sin R}{13.4}$.

Which is easier to solve?

Lesson: Practicing applying the sine rule pp. 17-21

The ambiguous case page 21

The sine formula for the area of a triangle page 22

Homework: Practice exercises 1E p. 21-22

GQ: How do we practice the law of sines?

CCSS: MP5 attend to precision

1.9 Tuesday 17 Sept

Deltamath practice: scientific notation, trig

1. Laptops, login with Teacher ID 546068
2. Do Deltamath sections in order
Practice comes first, then new topics
3. Work extra problems on the skills you need to practice

New material: The sine formula for the area of a triangle page 22
Radian / degree conversion; law of cosines

Homework: Complete Deltamath problems, 10:00PM deadline

GQ: How do we calculate the angles of a triangle?

CCSS: MP5 attend to precision

1.10 Wednesday 18 Sept

Do Now: Precision practice

1. Chapter review #6 p. 39

Lesson: The cosine rule pp. 23-24

The sine formula for the area of a triangle page 22

Homework: Practice exercises 1F p. 24-25

GQ: How do we “solve” a triangle?

CCSS: MP5 attend to precision

1.11 Thursday 19 Sept

Do Now: IB exam problems

1. Applications of the sine and cosine rules

Lesson: The cosine rule pp. 23-24

The sine formula for the area of a triangle page 22

Homework: Study Arc length and area of sector

Oxford textbook pp. 25-27

Deltamath, practice circle sectors and arc length

Khan Academy, log in and use videos as resource (DrHuson)

GQ: How do we calculate the angles of a triangle?

CCSS: MP5 attend to precision

1.12 Friday 20 Sept

Continue IB exam trig problems

Lesson: The cosine rule pp. 23-24

The sine formula for the area of a triangle page 22

Homework: Complete Khan videos and Deltamath problems if you haven't already.

Practice exercises 1G p. 26-27