

Mathematics Class Slides

Bronx Early College Academy

Chris Huson

20 September 2021

4.1 Introduction to linear functions Thursday 2 January

4.2 Linear models, rate of change Friday 3 January

4.3 Graphing quiz, direct variation, modeling Monday 4 January

4.3 Writing to learn - probability text

4.4 Deltamath review, test corrections Tuesday 5 January

4.5 Modeling, piecewise functions Wednesday 8 January

4.6 Function inverse and function composition Thursday 9 January

4.7 Function inverse and function composition Friday 10 January

4.9 Graphing quadratic functions Wednesday 15 January

4.10 Graphing quadratic functions Thursday 16 January

GQ: How do we interpret linear graphs?

CCSS: HSS.CP.A.4 Understand linear functions

4.1 Thursday 2 January

Do Now Skills check page 141

Know three forms of linear equations:

1. Slope-intercept form: $y = mx + b$
2. Standard form: $ax + by = c$
3. Point-slope form: $(y - y_1) = m(x - x_1)$

Afterschool review exploration papers

Lesson: linear functions review pp. 140-150

Homework: Textbook exercises 4A p. 146 & 4B p. 150 (and 4C optionally)

GQ: How do we interpret slope as rate of change?

CCSS: HSS.CP.A.4 Understand linear functions

4.2 Friday 3 January

Do Now handout

Know three forms of linear equations:

1. Slope-intercept form: $y = mx + b$
2. Determining the slope from two points
3. Applying point-slope form: $(y - y_1) = m(x - x_1)$

Afterschool review exploration papers

Lesson: 4.2 linear models, rate of change pp. 151-159

Homework: Textbook exercises 4C p. 153-4 & 4D p. 158-9

GQ: How do we interpret slope as rate of change?

CCSS: HSS.CP.A.4 Understand linear functions

4.3 Monday 4 January

Do Now Quiz

Know three forms of linear equations:

1. Slope-intercept form: $y = mx + b$
2. Determining the slope from two points
3. Applying point-slope form: $(y - y_1) = m(x - x_1)$

Welcome Mr. Nortonsmith

TOK p. 159:

To what extent does the language we use shape the way we think?

Lesson: Direct variation, modeling pp. 159-159

Homework: Textbook exercises 4E p. 160 & 4F p. 163-4

Writing to learn: Translate text into symbols

These answers are correct. Rewrite them using algebraic symbols.

Exam question:

6. Given events A and B with $P(A) = 0.4$, $P(B) = 0.5$,
 $P(A \cap B) = 0.25$.

(c) State whether events A and B are independent. Justify your answer.

Answer:

“No. Upon multiplying $P(A)$, which is 0.4, and $P(B)$, which is 0.5, it does not equal the intersection.”

“Events A and B are not independent. In independent events, the intersection of the two events equals the product of Event A and B . Since 0.15 (Event A) and 0.4 (Event B) do not multiply to their intersection (0.25), the two events are not independent.”

GQ: How do we interpret slope as rate of change?

CCSS: HSS.CP.A.4 Understand linear functions

4.4 Tuesday 5 January

Do Now: Venn diagram problem

1. Interpret the quantities in a Venn diagram
2. Assigning quantities to a Venn diagram given a situation
3. Interpret set notation as Venn diagram shading

Deltamath linear functions practice

Spicy: Vector introduction

Homework: Complete textbook exercises 4A-4F, Deltamath review problems

GQ: How do we model situations with multiple conditions?

CCSS: HSS.CP.A.4 Understand linear functions

4.5 Wednesday 8 January

Do Now: Function and algebra review

1. Simple function notation
2. Calculator use with trig functions
3. Solve literal equations algebraically

Lesson: Piecewise functions pp. 165-167

Homework: Textbook exercises 4G p. 167

GQ: How do we operate on functions?

CCSS: HSS.CP.A.4 Understand linear functions

4.6 Thursday 9 January

Do Now: Linear function IB problems

1. Simple function notation
2. Solving graphical situations

Lesson: Function inverse and function composition pp. 168-177

Homework: Handout (due tomorrow)

Textbook exercises 4H, 4I, & 4J (due Monday)

GQ: How do we operate on functions?

CCSS: HSS.CP.A.4 Understand linear functions

4.7 Friday 10 January

Do Now Quiz: Linear function IB problems

1. Simple function notation
2. Solving graphical situations

Lesson: Graphical interpretation of function inverse pp. 168-177

Homework: Textbook exercises 4H, 4I, & 4J

GQ: How do we graph quadratic functions?

CCSS: HSS.CP.A.4 Understand linear functions

4.9 Wednesday 15 January

Do Now Pre-Quiz: Function operations IB problems

1. Function composition
2. Simple function notation
3. Solving graphical situations

Lesson: Quadratic functions pp. 233-236

Homework: Textbook exercises 6A

Late work due today (for MP1 report card)

GQ: How do we graph quadratic functions?

CCSS: HSS.CP.A.4 Understand linear functions

4.10 Thursday 16 January

Do Now: Functions IB problems

1. Graphing quadratics
2. Linear equations
3. Simple function notation
4. Solving graphical situations

Lesson: Quadratic functions pp. 233-236

Homework: Study for **exam tomorrow** (no quadratics)