

Mathematics Class Slides

Bronx Early College Academy

Chris Huson

15 October 2019

BECA / Dr. Huson / IB Math Unit 2

2.1 Intro to statistics 11 Oct

2.2 Deltamath: statistics 15 Oct

2.3 Descriptive statistics measures, 17 Oct

2.4 Descriptive statistics measures, 18 Oct

2.5 Frequency tables of continuous variables 21 Oct

2.6 Revise Excel analysis summary page 22 Oct

2.6 Histograms and box plots 23 Oct

2.7 Cumulative frequency tables and graphs 24 Oct

2.8 Revise Excel analysis summary page 25 Oct

2.9 Cumulative frequency tables and graphs 28 Oct

2.10 Revise Excel analysis summary page 29 Oct

2.11 Review cumulative frequency tables and graphs 30 Oct

2.11 Bivariate data 30 Oct

2.11 Exploration project paper schedule 31 Oct

2.12 Cumulative distribution practice 1 Nov

2.13 Linear regression practice 4 Nov

2.14 Linear regression practice 6 Nov

2.15 Cumulative distribution practice 7 Nov

2.16 Cumulative distribution application, quiz 8 Nov

2.7.5 Cumulative distribution application, quiz 20 Nov

GQ: How do we collect and organize data?

CCSS: HSF.IF.C.7 Analyze functions

2.1 Friday 11 Oct

Do Now Handout: Analyze chart on p 45

1. Income vs Health of the world's nations
2. Answer the questions

Lesson: Statistics concepts and vocabulary pp 44-50

Homework: Problem set: Organizing data 2A p. 50

GQ: How do we quantify central tendency and dispersion?

CCSS: MP5 attend to precision

2.2 Tuesday 15 Oct

Using spreadsheets for data, calculations, and display

1. Boot up laptops, log in to email and Google Drive account
2. Download Excel "Simple Calculator" (explore)
3. Early finishers: model problem #5, p. 56

Deltamath practice

Homework: Complete Deltamath problems, 10:00PM deadline

GQ: How do we quantify central tendency and dispersion?

CCSS: MP5 attend to precision

2.3 Thursday 17 Oct

Laptops: Statistical analysis in Excel

1. Create a one-page report answering problem #5 p.56
2. Replicate the “raw data table” with modifications for Excel
3. Use Excel functions for the required statistical calculations
4. Include text to answer the question with a short justification
5. Format in Excel (including MLA header) and “print” as pdf
6. Email Excel and pdf to me by 10:00pm today
7. Early finishers: Deltamath

GQ: How do we quantify central tendency and dispersion?

CCSS: MP5 attend to precision

2.4 Friday 18 Oct

Laptops: Statistical analysis with a handheld calculator

1. Enter in your calculator problem #5 p.56
2. Compare results to your Excel report
3. Prepare to discuss comparison of Excel to a handheld calculator

Review Excel analysis and reporting

Lesson: Continuous data and using frequency tables p 57

Homework: Practice exercises 2B & 2C p. 55-56, 58 (class time tomorrow)

GQ: How do we collect and organize data?

CCSS: HSF.IF.C.7 Analyze functions

2.5 Monday 21 Oct

Do Now: #13 P2, p 78

1. Work on loose leaf paper you can turn in
2. Use a calculator
3. Use the definition of outlier on page 53
4. Draw the plot accurately

Exploration paper scoring criterion: Personal Engagement
Review Excel analysis

Lesson: Continuous data and using frequency tables p 57

Homework: Rework Excel file

GQ: How do we communicate statistical results?

CCSS: MP5 attend to precision

2.6 Tuesday 22 Oct

Using spreadsheets for data, calculations, and display

1. Boot up laptops, log in to email and Google Drive account
2. Download your saved Excel model of Mr. Jones club scores
3. Complete and improve your analysis
4. Email the Excel file and a pdf version (1 page)

Deltamath practice

Homework: Complete Deltamath problems, 10:00PM deadline

GQ: How do we display data?

CCSS: HSF.IF.C.7 Analyze functions

2.6 Wednesday 23 Oct

Do Now: #3 p. 75

1. Work on loose leaf paper you can turn in
2. Use a calculator
3. Explain (in writing) why your answers are estimates

Real world, pseudo real world, & pure math problems; implications

Birthday data analysis

Lesson: Box plots and histograms p 59-62

Homework: Textbook exercises 2D p. 62

GQ: How do we display and interpret cumulative data?

CCSS: HSF.IF.C.7 Analyze functions

2.7 Thursday 24 Oct

Do Now: #4, p 75, continued on p. 76

1. Work on loose leaf paper you can turn in
2. Use a calculator for calculations and to replicate the plot
3. Clearly answer parts #4d.i and #4d.ii

Exploration paper scoring criterion: Personal Engagement

Review student birthday survey data & analysis

Lesson: Cumulative frequency tables and graphs p 63-5

Homework: Textbook exercises 2E p. 64-5

GQ: How do we communicate statistical results?

CCSS: MP5 attend to precision

2.8 Friday 25 Oct

Mini Exploration: What is the best route to school?

1. Based on Excel model of commuter data (math.huson.com)
2. Complete statistical calculations and written analysis
3. Email the Excel file and a pdf version of spreadsheet & paper (three attachments)

Homework: Complete your paper, Sunday 10:00PM deadline

GQ: How do we display and interpret cumulative data?

CCSS: HSF.IF.C.7 Analyze functions

2.9 Monday 28 Oct

Do Now: Handout IB exam problems (paper 2, with calculator)

1. Work on loose leaf paper you can turn in
2. Frequency distribution (table)
3. Box plot interpretation

Peer review of draft of subway commute analysis

Lesson: Cumulative frequency tables and graphs, handout

Homework: Statistics exam problems handout

GQ: How do we communicate statistical results?

CCSS: MP5 attend to precision

2.10 Tuesday 29 Oct

Mini Exploration: What is the best route to school?

1. Based on Excel model of commuter data (math.huson.com)
2. Complete written analysis
3. Email the Excel file and a pdf version of spreadsheet & paper (three attachments)

Homework: Complete your paper, today 10:00PM deadline

GQ: How do we display and interpret cumulative data?

CCSS: HSF.IF.C.7 Analyze functions

Wednesday 30 Oct

Do Now: Handout IB exam problems (paper 2, with calculator)

1. Work on loose leaf paper you can turn in
2. Frequency distribution (table)
3. Cumulative distribution interpretation

Lesson: Cumulative frequency tables and graphs, handout

Homework: Brainstorm exploration topic, complete statistics exam problems handout

GQ: How do we employ mathematics to explore a topic?

CCSS: MP5 attend to precision

Thursday 31 Oct

Do Now: Mr. Price's students, page 66

1. Enter the data in the table on page 66 into your calculator
2. To graph the data pairs, what values for x and y are needed?
3. Plot the data on graph paper
4. Interpretation the graph

Mind map / brainstorming an exploration topic p. 743

Lesson: 2.4 Comparing two sets of related quantities

Homework: Make at least one topic mind map (due tomorrow)

Exercises 2F, p. 71-72 (due Friday, share data for extra credit)

GQ: How do we employ mathematics to explore a topic?

CCSS: MP5 attend to precision

Thursday 31 Oct

Exploration: Schedule and deadlines

1. Topic selection - Monday November 4th
2. Complete paper for peer review - Friday November 22nd
3. Complete paper for grade - Friday December 6th
4. Final paper - Friday January 17th

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

Friday 1 Nov

Do Now: Problem 1d Classwork 28 Oct

1. Answer the questions
2. Interpretation the graph
3. complete the table

Lesson: Cumulative distributions

Homework: Exploration topic due

GQ: How do we display and interpret bivariate data?

CCSS: MP5 attend to precision

12.13 Monday 4 Nov

Do Now: Problem 10 page 77

1. Plot the data and interpret the graph
2. Answer the questions *including* the outlier at first
3. Interpretation the graph
4. Organize and write the summary statistics near the plot

Lesson: Linear regression applications

Homework: Deltamath regression practice.

Read example exploration paper ([link](#)).

Begin outline of your exploration topic.

GQ: How do we display and interpret bivariate data?

CCSS: MP5 attend to precision

12.14 Wednesday 6 Nov

Do Now: Problem 17 page 79

1. Plot the data and interpret the graph
2. Answer the questions
3. Interpretation the graph
4. Organize and write the summary statistics near the plot

Discuss subway platform exploration

Lesson: Linear regression applications

Homework: Deltamath regression practice.

example exploration paper (link).

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

Thursday 7 Nov

Do Now: Handout problem set

1. Answer the questions
2. Interpretation the graph
3. complete the table

Lesson: Cumulative distributions

Homework: Develop exploration topic

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

Friday 8 Nov

2.16 Do Now Quiz: IB problems handout

1. Write down your exploration topic
2. Summarizing frequency table data
3. Interpreting box plots

Lesson: Comparing quantitative data in Excel, an exploration
Make your own analysis of subway platform crowding versus delays.
(use the raw data file on math.huson.com)

Homework: Write up analysis. Email Excel, Word, & pdf files. Due
10:00 Sunday

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

3.7 Wednesday 20 Nov

2.16 Do Now: Handout practice of stats problems

1. Frequency tables, univariate summary statistics
2. Bivariate data analysis

Review stats quiz problems

Lesson: Cumulative plots

Exit note re-quiz: Univariate summary statistics

Homework: Statistics Pre-exam; Exploration paper

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

3.8 Thursday 21 Nov

2.16 Do Now: Handout practice of stats problems

1. Bivariate data analysis

Review stats Pre-exam problems

Homework: Exploration paper

GQ: How do we display and interpret cumulative data?

CCSS: MP5 attend to precision

2.19 Monday 25 Nov

Descriptive Statistics exam

1. Summary statistics, frequency tables
2. Dispersion, box plots
3. Cumulative distributions
4. Bivariate data analysis

Homework: Exploration paper peer review