

Mathematics Class Slides

Bronx Early College Academy

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12 November 2019

3.1 Introduction to probability 13 Nov

3.2 Probability as fractions 14 Nov

3.3 Sample spaces & Venn diagrams 18 Nov

3.4 Set operations on Venn diagrams 2 Dec

3.5 Using tree diagrams 4 Dec

3.6 Using tree diagrams 5 Dec

3.7 Algebraic probability rules 9 Dec

3.8 Algebraic probability rules 10 Dec

3.9 Algebraic probability rules 11 Dec

3.10 Algebraic probability rules 12 Dec

3.11 Probability unit exam 13 Dec

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

CCSS: HSS.CP.A.4 Understand conditional probability

3.1 Wednesday 13 Nov

Do Now Skills check page 205

1. Treat probabilities as fractions between zero and one
2. Use tables to organize data

Afterschool today; parent conferences tomorrow 4:00-7:00, Friday

Lesson: theoretical and experimental probabilities, notation

Homework: Read and evaluate sample exploration paper according to criteria pp. 737-740

GQ: How do we quantify uncertainty?

CCSS: HSS.CP.A.4 Understand conditional probability

3.2 Thursday 14 Nov

2.16 Do Now: Dice probability

1. probability tables (pdf)

Scoring an exploration paper

Lesson: Probability calculations

Homework: Textbook exercises 5A p. 210-211; exploration paper

GQ: How do we organize the event space for analysis?

CCSS: HSS.CP.A.4 Understand conditional probability

3.3 Monday 18 Nov

2.16 Do Now: Express each probability as a fraction

1. Rolling a twelve with two dice
2. Drawing an ace from a deck of cards
3. Having a birthday on a weekday
4. Two students in a class of 30 have the same birthday

Review homework problems 5A p. 211

Lesson: Venn diagrams and sample spaces

Homework: Textbook exercises 5B p. 215; exploration paper

GQ: How do we combine events on a Venn diagram?

CCSS: HSS.CP.A.4 Understand conditional probability

3.4 Monday 2 Dec

Do Now: Using Venn diagrams to organize a situation

1. Listing sets
2. The universal set U
3. Items in, or not in, multiple sets

Review homework problems 5B p. 211

Example email conventions

Lesson: 5.3 Set operations & Venn diagrams

Homework: Textbook exercises 5C p. 220

Exploration paper due Friday

GQ: How do we diagram a situation with a tree?

CCSS: HSS.CP.A.4 Understand conditional probability

3.5 Wednesday 4 Dec

Do Now: Conditional probability from a matrix

1. What is the probability of each event overall?
2. What is the probability conditional on each subset?

Review homework problems 5C p. 220

Lesson: 5.4 Probability and tree diagrams

Homework: Textbook exercises 5D p. 223-4

Exploration paper **due Friday**

GQ: How do we diagram a situation with a tree?

CCSS: HSS.CP.A.4 Understand conditional probability

3.6 Thursday 5 Dec

Do Now: Conditional probability

1. Organizing with a Venn diagram
2. Using a tree to organize a situation

Review homework problems

Lesson: 5.4 Probability and tree diagrams

Homework: Exploration paper due tomorrow 10:00pm

GQ: How do we model probability algebraically?

CCSS: HSS.CP.A.4 Understand conditional probability

3.7 Monday 9 Dec

Do Now: Conditional probability, independence

1. Translate the situation below to a Venn diagram and a tree
2. Given that a student is absent a lot, what is the probability he/she is also out of uniform?
3. According to the data, is attendance related to being in uniform?

	wears uniform	out of uniform
perfect attendance	18	6
often absent	6	2

Review homework problems, handout and textbook 5D p. 223-4
Lesson: Probability formulas, box page 218

Homework: probability situations handout, exam Friday

GQ: How do we model probability algebraically?

CCSS: HSS.CP.A.4 Understand conditional probability

3.8 Tuesday 10 Dec

Do Now: Conditional probability, independence

1. Apply formulas for calculations
2. Interpret diagrams algebraically
3. Apply probability formulas to solve problems (IB exam problems)

Review homework problems, handout and textbook 5D p. 223-4

Lesson: Mutually exclusive, formula sheet, box page 218

Homework: Pretest handout, exam Friday

GQ: How do we model probability algebraically?

CCSS: HSS.CP.A.4 Understand conditional probability

3.9 Wednesday 11 Dec

Do Now: Conditional probability, independence

1. Translate the situation below to a Venn diagram and a tree
2. Given that a student is absent a lot, what is the probability he/she is also out of uniform?
3. According to the data, is attendance related to being in uniform?

Lesson: Statistics principles

Homework: Pretest handout, exam Friday

GQ: How do we model probability algebraically?

CCSS: HSS.CP.A.4 Understand conditional probability

3.10 Thursday 12 Dec

Do Now: Statistics situations

1. Translate the situation below to a Venn diagram and a tree

Lesson: Trigonometric applications

Homework: Pretest handout, exam tomorrow

GQ: How do we apply the principles of probability?

CCSS: HSS.CP.A.4 Understand conditional probability

3.11 Friday 13 Dec

Probability unit exam

1. Law of cosines, sines, sine formula for triangle area (applications)
2. Descriptive statistics: summary figures, histograms, correlation, cumulative graphs
3. Venn diagrams, data tables, trees, probability formulas

Homework: Have a nice holiday break!
(work on your project paper)