

# 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

## 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