

12.1 IB Math - Unit 9: Probability

Bronx Early College Academy

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7.1 Venn diagrams, Monday 18 March

7.2 Deltamath probability review. Tuesday 19 March

7.3 Expected value, Wednesday 20 March

7.4 Conditional probability, trees with & without replacement,
Thursday 21 March

7.5 Binomial distribution, Friday 22 March

7.6 Binomial distribution, Monday 25 March

7.7 Deltamath binomial expansion review. Tuesday 25 March

GQ: How do we notate sample spaces with Venn diagrams?

CCSS: HSS.CP.A.3 Understand conditional probability

7.1 Monday 18 March

Do Now: Draw a Venn diagram of these 110 students:

- ▶ 25 students took physics
- ▶ 45 students took biology
- ▶ 48 students took mathematics
- ▶ 10 students took physics and mathematics
- ▶ 8 students took biology and mathematics
- ▶ 6 students took biology and physics
- ▶ 5 students took all three subjects

How many took biology, but neither physics nor mathematics?

How many students did not take any of the three subjects?

Lesson: Sets, complements, union, intersection, empty set

Homework: Problem set

GQ: How do we notate sample spaces with Venn diagrams?

CCSS: HSS.CP.A.3 Understand conditional probability

7.2 Tuesday 19 March

Do Now Quiz: Trig, calculus practice, with calculator

1. *Medium* Middling exam problems
2. *Spicy* Middling and extended exam problems

Lesson: Deltamath probability (trigonometry & calculus) review

Homework: Complete Deltamath problem set, review quiz answers

GQ: How do we calculate expected value?

CCSS: HSS.MD.A.3 Develop a probability distribution for a random variable

7.3

Wednesday 20 March

Do Now: Algebra practice, with calculator

Lesson: Expected value

Homework: Problem set

GQ: How do we add the probabilities of multiple events?

CCSS: HSS.CP.A.3 Understand conditional probability

7.4 Thursday 21 March

Do Now Quiz: Trig, calculus practice, with calculator

1. *Medium* Middling exam problems
2. *Spicy* Middling and extended exam problems

Lesson: Conditional probability, trees with & without replacement

Homework: Problem set

GQ: How do we model a series of events?

CCSS: HSS.MD.A.3 Develop a probability distribution for a random variable 7.5 Friday 22 March

Do Now: Make a tree representing three coin flips

1. What is the probability of each outcome?
2. If order doesn't matter, how can the results be consolidated into a probability distribution of the total number of heads?

Lesson: Binomial expansion p. 186-8

Homework: Problem set

GQ: How do we model a series of events?

CCSS: HSS.MD.A.3 Develop a probability distribution for a random variable 7.6 Monday
25 March

Do Now: Sequences review, Exercise 6L #1-4 p. 182-3

1. Use the sequences formulas on the formula sheet
2. The equation for compound interest (try to remember it first)
is $P_n = P_0(1 + \frac{i}{c})^{cn}$

Lesson: Binomial expansion p. 186-8

Assessment: Exercise 6N p. 187

Homework: Exercise 6O p. 188

GQ: How do we model a series of events?

CCSS: HSS.MD.A.3 Develop a probability distribution for a random variable 7.7 Tuesday
25 March

Do Now Quiz: Trig Paper 1, without calculator

1. *Medium* Middling exam problems: Periodic functions

Lesson: Deltamath probability (trigonometry & calculus) review

Homework: Complete Deltamath problem set, review quiz answers