11.1 IB Math - Unit 7 Sequences and Series

Bronx Early College Academy

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BECA / Dr. Huson / 11.1 IB Math - Unit 7 Sequences and Series

7.1 Introduction and definitions Monday 18 March

7.2 Deltamath recursive notation practice, Tuesday 19 March

7.3 Geometric sequences, Wednesday 20 March

7.4 Arithmetic series, Thursday 21 March

7.5 Geometric series, Monday 25 March

7.6 Geogebra Fibonacci sequence, Tuesday 26 March

7.7 Geogebra Fibonacci sequence, Thursday 28 March

GQ: How do we work with sequences?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.1 Monday 18 March

Do Now: Complete Investigation - *Saving Money* p. 162

Lesson: Arithmetic sequences, recursion, definitions p.161-6

Homework: Exercises 6A (a & b only) p. 164, 6B p. 166

GQ: How do we use recursive notation?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.2 Tuesday 19 March

Deltamath probability practice

Homework: Complete Deltamath exercises

GQ: How do we model compound growth?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.3 Wednesday 20 March

Do Now: Exercise 6C p. 167

Lesson: Geometric sequences, Sigma notation p.167-171

Homework: Exercises 6D, 6E, 6F (odds only) p. 168, 169, 171

GQ: How do we calculate the sum of a sequence?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.4 Thursday 21 March

Do Now: Exercise 6E #4, #6 p. 169-170

Lesson: Arithmetic series, Sigma notation p.167-171

Homework: Exercises 6G, 6H (odds only) p. 173-5

GQ: How do we calculate the sum of a sequence?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.5 Monday 25 March

Do Now: Review exercise #1, #2a, 2b, #3 p. 189

Lesson: Geometric series p. 175-7

Homework: Exercises 6I, 6J (a, c only) p. 176, 178

GQ: How do we depict the Fibonacci sequence geometrically?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model situations

7.6 Tuesday 26 March

Do Now: Find an example of the Golden Mean

1. Measure three distances: from the floor to your belly button (b), from your belly button to the top of your head (a), & from the floor to the top of your head ($a + b$). (they should add up)
2. Compute the following two ratios: $\frac{a}{b}$ and $\frac{b}{a+b}$
3. Are the two ratios equal?
4. Solve for $\frac{a}{b}$, such that $\frac{a}{b} = \frac{b}{a+b}$

Lesson: Geogebra construction of the Fibonacci spiral
Homework: Complete a project paper. (good luck on the SAT tomorrow)

GQ: How do we depict the Fibonacci sequence?

CCSS: HSF.BF.A.2 Write arithmetic and geometric sequences, use them to model 7.7

Thursday 28 March

Exploration: Fibonacci Spiral project

1. Do Now: solve for $\frac{a}{b}$, such that $\frac{a}{b} = \frac{a+b}{b}$
2. Read paper: math hacks, search online for images of the Golden Mean and Fibonacci Sequence

Lesson: MLA citations and references, table captions
Homework: Complete the project paper. Store all files in Dropbox folder. Email a final pdf to me (filename: lastname_projectname.pdf)