Unit 17: Sequences and Series

Content Area: **Mathematics**
Course(s): **PreCalc Trig A**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

Standards

MA.F-IF.A.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.
MA.F-IF.A.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
MA.F-IF.A.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.

Enduring Understandings

Patterns can be reprsented through adding a common difference or multiplying a value.

Repeated addition can follow similar rules by being a series.

Essential Questions

What is the difference between arithmetic and geometric sequences?

What is a series?

What is sigma notation?

How do you identify if a scenario requires a geometric or arithmetic sequence or series?

Knowledge and Skills

- Evaluate an arithmetic sequence.
- Apply properties of an arithmetic/geometric sequence.
- Identify what types of geometric series converge and what they converge to.

Transfer Goals

Understanding them echanics of a problem allows for proper execution of a technique to solve it.

Resources

1. Pre-Calculus with Limits - Aufmann
2. Trigonometry 6th edition - Lial
3. Classkick
4. Khan Academy
5. PurpleMath
6. KutaSoftware
7. CK-12
8. Quizlet
9. Albert I/O
10. Desmos
11. Problem Attic