# Unit 17: Sequences and Series

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

## Standards

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|---|---|
| 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 □ is a function and □ is an element of its domain, then □(□) denotes the output of □ corresponding to the input □. The graph of □ is the graph of the equation □ = □(□). |
| 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