Unit 17: Sequences & Series

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

Standards - NJCCS/CCSS

CCSS.Math.Content.HSF-IF.A.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.
CCSS.Math.Content.HSA-SSE.B.4	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.
CCSS.Math.Content.HSF-BF.A.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.
CCSS.Math.Content.HSF-LE.A.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

Enduring Understandings

Arithmetic and geometric sequences and series are mathematical patterns that stem from practical situations.

Essential Questions

What is the difference between an arithmetic sequence and a geometric sequence?

Do all infinite geometric sequences converge?

What does signma notation represent?

How does one identifiy if a scenario is geometric or arithmetic?

Knowledge and Skills

SWBAT evaluate an arithmetic sequence.

SWBAT apply the properties of arithmetic sequences.

SWBAT evaluate a geometric sequence.

SWBAT apply the properties of geometric sequences.

SWBAT identify which types of geometric sequences converge and what they converge to.

Resources

Precalculus with Limits

Authors: Aufmann, Barker, Nation

Graphing Calculator

www.desmos.com

www.flipgrid.com

www.graphfree.com