



Algebra II Pacing & Assessment Guide

JMCSS DEPARTMENT OF CURRICULUM & INSTRUCTION

Unit I – Arithmetic and Geometric Sequences

Description: Students will connect their prior study of algebraic patterns with the concepts in this unit. Students explore the basic characteristics of arithmetic and geometric sequences and series, connecting these ideas to functions whose domains are a subset of the integers. They find explicit formulas, recursive processes, and sums. Students derive summation formulas for finite arithmetic and geometric series. Finally, they explore the notions of convergence and divergence as they develop the formula for the sum of an infinite geometric series.

Domain	Tennessee State Standards	Assessed on TNReady	
		Part I	Part II
Write Expressions in Equivalent Forms to Solve Problems (SSE.B)	A-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. For example, calculate mortgage payments. ★	X	X
Understand the Concept of a Function and use Function Notation (IF.A)	F-IF A.3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.	X	X
Construct and Compare Linear, Quadratic, and Exponential Models and Solve Problems (LE.A)	F-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).	X	