Grade 10-11
Distance Learning Module 4: Week of: April 20th – April 24th

Mathematics: Pre-Calculus – Level 1 Honors *Modified from Unit E - Sequences, Series and Probability*

Targeted Goals from Stage 1: Desired Results

Content Knowledge: 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. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.

Vocabulary: Sequence, Series, Explicit, Recursive, Factorial, Summation, Arithmetic, Geometric, Induction, Binomial Expansion, Pascal's Triangle, Combinations, Permutations

Skills:

- using nth term formulas to find specific terms of a sequence
- determined nth term formulas for arithmetic and geometric sequences
- applying summation formulas for arithmetic and geometric sequences

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Review of 9.1- 9.3	Khan Academy and your textbook, if needed	Ch 9.1 explicit and recursive sequences and sums.pdf 9.3 geometric sequences worksheet.pdf
Tuesday: Check-in	Virtual class meeting	Review homework and discuss pacing
Wednesday: Review of 9.3	Khan Academy and your textbook, if needed	9.1-9.3 Arithmetic and geometric series.pdf

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Thursday: Binomial Theorem	Khan Academy video: Intro to the Binomial Theorem Khan Academy video: Pascal's triangle and Binomial Expansion Khan Academy video: Expanding Binomials	Textbook p.688. #1-45 eoo
Friday: Check-in	Virtual class meeting	Review homework and any problems that the students are experiencing

Week criteria for success (attach student checklists or rubrics): Students will be able to:

- find partial sums of arithmetic sequences and series
- use the Binomial Theorem to find the terms of a binomial Expansion
- understand and use Pascal's Triangle

Supportive resources and tutorials for the week (plans for re-teaching): Khan Academy, Precalculus with Limits by Larson and Hostetler, virtual class meetings