Pre-Calculus Honors - *Modified from* [Unit E- Sequences, Series and Probability](#)

Targeted Goals from Stage 1:

Content Knowledge: Know and apply the Binomial Theorem for the expansion of $(x + y)n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle. Understand independence and conditional probability and use them to interpret data

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

Skills:

- expanding a binomial using the binomial theorem
- using counting principles to determine probabilities

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Binomial expansion	Khan Academy video: Expanding binomials w/o Pascal's triangle Khan Academy video: Binomialexpansion and combinatorics Khan Academy video: Pascal's triangle and combinatorics	Khan Academy practice: Expand binomials Textbook p. 698, #15-21 odd, 37-41 odd, 47-53 odd, 67
Tuesday: Intro to Probability	Virtual class meeting Khan Academy video: Probability with Venn diagrams Khan Academy video: Addition Rule for probability	Review homework and any problems that the students are experiencing
Wednesday: Probability with counting outcomes and compound events	Khan Academy video: Die rolling probability Khan Academy video: Probability	Khan Academy practice: Probabilities of compound events

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	with counting outcomes Khan Academy video: Compound events example with tree diagram	
Thursday: Probability of independent events	Khan Academy video: Compound probability of independent events Khan Academy video: Probability without equally likely events Khan Academy video: Independent events example: test taking	Textbook p.709, #1-17 eoo, 37, 39, 45
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:

- Expand binomials using the binomial theorem and Pascal's triangle
- Determine the probability of independent events

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