

Unit 10 Sequences and Series (Optional)

Content Area: **Math**
Course(s): **Accelerated PreCalculus, CP PreCalculus**
Time Period: **Marking Period 4**
Length: **2**
Status: **Published**

Unit Overview

In this unit, students will analyze sequences and series, and expand binomials.

Enduring Understandings

- Students will represent sequences and series and use them to model real-life phenomena. They will also expand binomials using Pascal's Triangle and the Binomial Theorem.

Essential Questions

How do you represent a sequence of numbers or the sum of a sequence?

How do you find the n th term or partial sum of an arithmetic sequence?

How do you find terms and sums of geometric sequences?

How do you use mathematical induction to find and prove formulas for sums of sequences and series?

How do you count the number of ways in which an event occurs?

How do you find the probability that a series of events will occur?

How do you find the expansion of a binomial $(x+y)^n$?

Formative Assessments

- Daily homework checks
- Quiz
- Chapter Test
- Exit Tickets
- Warm-ups

- Webassigns

Summative Assessment

- Unit Test
- Unit Project

Alternate Assessments

- Modified homework
- Modified quizzes
- Modified tests
- Modified projects

Closure

- Low-Stakes Quizzes - Give a short quiz using technologies like Kahoot or a Google form.
- Have students write down three quiz questions (to ask at the beginning of the next class).
- Have students dramatize a real-life application of a skill.
- Ask a question. Give students ten seconds to confer with peers before you call on a random student to answer. Repeat.
- Have kids orally describe a concept, procedure, or skill in simple terms.
- Direct kids to raise their hands if they can answer your questions. Classmates agree (thumbs up) or disagree (thumbs down) with the response.
- Have kids create a cheat sheet of information that would be useful for a quiz on the day's topic.
- Students write notes to peers describing what they learned from them during class discussions.
- Have students fill out a checklist with the objectives for the day.
- Have students complete an exit ticket without putting their name on it. Hand back exit tickets the next day in class and have students correct as a warm up.
- Ask students to write what they learned, and any lingering questions on an "exit ticket". Before they leave class, have them put their exit tickets in a folder or bin labeled either "Got It," "More Practice, Please," or "I Need Some Help!"
- After writing down the learning outcome, ask students to take a card, circle one of the following options, and return the card to you before they leave: "Stop (I'm totally confused.)" Go (I'm ready to move on.)" or "Proceed with caution (I could use some clarification on . . .)"

