

Summary

SL - Chapter 1 - Sequences and series

Subject	Year	Start date	Duration
Mathematics: analysis and approaches	IB2	Week 3, November	3 weeks

Course Part

Description

In this unit you will explore arithmetic and geometric sequences and series as well as the Binomial Theorem.

Inquiry & Purpose

Inquiry / Higher Order Questions

Type	Inquiry Questions
Skills-based	How can you determine if a sequence is geometric, arithmetic or other?
Concept-based	When does an infinite series have a finite sum?

Curriculum

Aims

Develop an understanding of the concepts, principles and nature of mathematics

Objectives

Reasoning: Construct mathematical arguments through use of precise statements, logical deduction and inference and by the manipulation of mathematical expressions.

Syllabus Content

Topic 1: Number and algebra

SL Content

SL 1.2

Arithmetic sequences and series.

Use of the formulae for the n^{th} term and the sum of the first n terms of the sequence.

IB DP IB Mathematics Analysis and approaches SL (IB2)

Use of sigma notation for sums of arithmetic sequences.

Applications.

Analysis, interpretation and prediction where a model is not perfectly arithmetic in real life.

SL 1.3

Geometric sequences and series.

Use of the formulae for the n^{th} term and the sum of the first n terms of the sequence.

Use of sigma notation for the sums of geometric sequences.

Applications.

 **ATL Skills**

 **Approaches to Learning**

 **Thinking**

- In this unit, we will

ask students to formulate a reasoned argument to support their opinion or conclusion


set students a task which required higher-order thinking skills (such as analysis or evaluation)


build on a specific prior task

ask questions that required the use of knowledge from a different subject from the one you are teaching


 **Developing IB Learners**

 **Learner Profile**

 Inquirers

 Knowledgeable

 Thinkers

 Reflective