

## Summary

### SL - Exponential and Logarithmic Functions Draft

Subject	Year	Start date	Duration
Mathematics: applications and interpretation	IB1	Week 4, April	4 weeks

Course Part

## Inquiry & Purpose

### ? Inquiry / Higher Order Questions

Type	Inquiry Questions
Skills-based	What does the horizontal asymptote represent?
Skills-based	How can you decide if a function has an a horizontal asymptote?

## Curriculum

### 🎯 Aims

Develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics

### 📌 Objectives

**Technology: Use technology accurately, appropriately and efficiently both to explore new ideas and to solve problems.**

### 📖 Syllabus Content

#### Topic 1: Number and algebra

SL Content

SL 1.3

Geometric sequences and series.

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

Use of sigma notation for the sums of geometric sequences.

Applications.

SL 1.4

Financial applications of geometric sequences and series:

compound interest

annual depreciation.

SL 1.5

Laws of exponents with integer exponents.

Introduction to logarithms with base 10 and e.

Numerical evaluation of logarithms using technology.

SL 1.7

Amortization and annuities using technology.



ATL Skills



Approaches to Learning



Thinking

- In this unit, we will

give students time to think through their answers before asking them for a response

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



Developing IB Learners



Learner Profile



Inquirers



Knowledgeable



Thinkers