

IB DP IB Mathematics Analysis and approaches SL 2022
(IB1)

Summary

SL Chapter 4 - Rational Functions

Subject	Year	Start date	Duration
Mathematics: analysis and approaches	IB1	Week 1, November	3 weeks

Course Part

Description

In this unit you will explore reciprocal and rational functions and their asymptotes.

Inquiry & Purpose

? Inquiry / Higher Order Questions

Type	Inquiry Questions
Concept-based	Why do rational functions have asymptotes?
Content-based	Why does an irrational function converge?

Curriculum

⊕ Aims

Employ and refine their powers of abstraction and generalization

◇ Objectives

Problem solving: Recall, select and use their knowledge of mathematical skills, results and models in both abstract and real-world contexts to solve problems.

📖 Syllabus Content

Topic 2: Functions

SL Content

SL 2.8

The reciprocal function $f(x) = \frac{1}{x}$, $x \neq 0$: its graph and self-inverse nature.

Rational functions of the form $f(x) = \frac{ax + b}{cx + d}$ and their graphs.

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Equations of vertical and horizontal asymptotes.

ATL Skills





Approaches to Learning

Thinking

- In this unit, we will
 - 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