Real Analysis I - AS 110.405 (88) - Spring, 2026

twest

January 2026

1 Foreword

Student notes for Real Analysis I.

2 Module 1

2.1 Lecture 1.1

Set: "an unordered collection of distinct objects" (0:37)
$A = 1, 2, 3, ...$

Membership: 2 is a member of A.
$2 \in A$

Set-builder notation $A = \{\text{elements} : \text{generating conditions}\}$

(The) Empty Set
$\emptyset = \{\}$

Subset $A \subset B$

Intersection $A \cap B$

Union $A \cup B$

Set Difference $A \setminus B$

Disjoint $A \cap B = \emptyset$

Statements:
A: Tom lives on land.
B: Tom lives on Earth.