An Introduction to Proofs

Hassium,

1 Logic

2 Sets

3 Functions

4 Integers

5 Cardinality

6 Real and Complex Numbers

In higher-level mathematics, such as algebra, students need "mathematical maturity" to understand and apply abstract ideas. There is no obvious way to determine this maturity, nor a clear method to teach someone how to write a proof. This note is designed to serve as a transition to proof-based mathematics, guiding students in adapting to the way mathematics operates.

1 Logic

Logic is the formal framework and rules of inference that ensure the validity and coherence of arguments in mathematics.

2 Sets

3 Functions

4 Integers

5 Cardinality

6 Real and Complex Numbers