

# An Introduction to Mathematical Proofs

## Overview

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When? Uhhh... Whenever You Watch

# What Are Proofs?

How do we know if something is true? We need to prove it. We'll develop the tools to tackle these problems.

In the process, we start learning about how to tackle problems and reason about our ideas.

# The Two Levels

Level One: Show that math, our toolbox, works

Level Two: Understand and communicate our proofs. Understand why a proof is true. We want to convince ourselves that the proof is true.

Communicate our proof to someone else. Either so that they can validate our claims, or show that we understand the proof, as explaining a proof proves that you understand it.

# Overview

First Half: Learning the necessary tools. Not as fun, but needed to get to the fun stuff!

Second Half: Applying our tools to solve problems in certain fields of mathematics. The reason why we developed our tools!

# What are you expected to do?

Anything! I'll have worksheets linked below to check and reinforce your learning!

# Resources

I'll have links in the description regarding similar content, future directions and whatever else might be necessary.

## Lastly,

This is hard. It's difficult. Don't feel bad for not understanding if you truly mean to understand. It's okay to pick it up later. It's okay to drop it. Just try!

If you have suggestions, let me know!