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Formalising Mathematics - Project 1

Intermediate Value Theorem

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Introduction

Proof of The theorem

Let us start by stating the theorem and its proof, which then will be broken down into separate lemmas which we can prove using Lean.

Theorem (Intermediate Value Theorem). *Let $f : [a, b] \rightarrow \mathbb{R}$ be a continuous function, then for all c between $f(a)$ and $f(b)$, there exists $x \in [a, b]$ satisfying $f(x) = c$.*

Proof.

□

Walkthrough in lean

Introduction