

Real Analysis

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A Nice Book: *Understanding Analysis* by Stephen Abbott

Prerequisites: Nothing, really. Everything will be dealt with will developed from "scratch". Enthusiasm and puzzlement, highly in demand. The trajectory of the course will be based on what you are interested in studying— therefore, your interest determines what we study!

Course Fundamentals:

- What is a Number?
- Properties of Real Numbers
- What is a Function?
- Properties of Real Functions
- Deltas and Epsilons
- Fundamental Theorems of Real Functions
- Whatever Else You Want . . .

Course Objective: Understanding the machinery of \mathbf{R} , the real number system, and real functions.

Homework: I believe that working on problems that interest you are the most beneficial in so far as true understanding of the material goes. Therefore, I encourage you to come up with atleast one question that puzzles you, and work on it to unravel the mystery—with a peer or with me!