

1116-97-1596 **Jonathan Kane*** (kanej@uww.edu), 2814 Regent Street, Madison, WI 53705-5218. *How to Write Proofs in Analysis*. Preliminary report.

Books that purport to teach students how to write proofs make significant mistakes.

1. They begin with a large amount of introductory logic instruction that students find tedious and unmotivated.
2. Books cover too much of the underlying topic such as Analysis or Algebra and lose sight of the topic of proof writing.
3. Proof writing is taught by example with inadequate explanation of the proof writing process.

After teaching a beginning proofs course a dozen times, I retired and began writing *How to Write Proofs in Analysis*, a text with the following goals.

1. Only the bare minimum amount of logic is covered at the beginning of the text. Other logic concepts are introduced as needed for the construction of proofs.
2. A majority of the text is devoted to the techniques of writing the proofs.
3. For proofs that follow a prescribed format, proof templates are introduced.
4. Each proof is preceded with a discussion of what the student should be thinking about when approaching the task of writing that proof.

This book is scheduled for publication in the summer of 2016 by Springer. (Received September 20, 2015)