Goto: Prof. King's page at Univ. of Florida.   Or: JK Homepage.

Modified: *Sunday, 10Jan2021*
Course: MHF3202 3E06 (17450) Sets.&.Logic MWF4 [10:40-11:30] Lit235 *Prof. King*
Course: MHF3202 1503 (27231) Sets.&.Logic MWF4 [10:40-11:30] ONLINE *Prof. King*

Sets and Logic

Welcome. Our Teaching Page has useful information for students in all of my classes. It has **my schedule**, LOR guidelines, and Usually Useful Pamphlets. One of them is the *Checklist* (pdf) which gives pointers on what I consider to be good mathematical writing. Further information is at our class-archive URL (I email this private URL directly to students).

Prof. King's Mastery of Zoom.   [Source unknown]

> Quantifiers ∀ and ∃ ("for all" *and* "there exists") *are like nitroglycerin, in that one little mis-step leads to the whole thing blowing up in your face.*
>   *There is no partial credit when it comes to Explosives and Quantifiers.*
>
>   *-JLF King*

General Info

Please take a gander at Past courses with notes, exams and links.

> Our two, free, online texts (you can freely download the PDFs to your computer) are these:
> Main textbook: The Book of Proof (**BoP**), by Richard Hammack.
>   Secondarily, we will use
> Transition to Higher Mathematics: Structure and Proof (**SaP**), by Bob A. Dumas and John E. McCarthy.

> ### Resources
>
> - *Current assignment:* Memorize the Math-Greek alphabet (pdf).
>
> - *Current assignment:* Become comfortable reading/writing Set-builder notation (up through "Equivalent predicates...").
>
> - *Current assignment:* Peruse the challenging PList: Problem List for SeLo (pdf). It has hyperlinks in the Table-of-Contents and the Index. **UPDATED** [Sunday, 03Jan2021]
>
> - *Current assignment:* Peruse Does Zero = One? (pdf). Here are some ~~proofs~~ *poofs* about which you can post to our Archive.
>
> - *Near Future:* The Euclidean algorithm can be conveniently applied in table-form; I call this form "Lightning Bolt" because the update-rule looks like a lightning-bolt (used thrice). *Please read* the Lightning-bolt algorithm (pdf), learning the algorithm,

but skipping the proofs.

Suggestion: Print out on paper (yes, *actual paper*), the practice sheet for LBolt (pdf) and fill-in the tables. This type of question for the first exam, Sept.30, so you should practice.

- *Future:* A std proof of the Inclusion-Exclusion principle (pdf), together with *Candy-Store*, *Derangement* and *Stirling-number* examples.

- *Future:* Please work-through W: Euclidean algorithm (up through "Extended Euclidean..." but skip the proofs) *and* work-through W: Modular arithmetic (through "Applications").

- *Past:* The first page of Algorithms in Number Theory (pdf), uses LBolt iteratively to compute the GCD of a list of integers, together with its list of Bézout multipliers. Page 2 uses LBolt to solve linear congruences: "Find all x where $33x$ is mod-114 congruent to 18."

- *Distant future:* Our **Primer on cardinality**. [Tuesday, 01Dec2020] **UPDATED**

- The famous On-line Encyclopedia of Integer Sequences, and some W: OEIS history, and a video with a challenge at the end.

- *Optional:* Everybody loves the *Euler-Fermat thm*. Available is Using EFT to solve $102^{70} + 1 = 113 = b^{37}$ (txt), from Prof. William Stein's book.

- *Optional:* Ring Basics.

- *Fun, challenging problems:* **HMMT** and **IMO** and **USAMO** and **Putnam**.

Examish stuff

- Exams/notes from previous incarnations: Aut.2020, Spr.2020, Aut.2019, Aut.2018, Spr.2017, Aut.2013, Spr.2012, and Aut.2011 [which also has **Autumn 2009** and **Spring 2008**].

This will help you decide if my teaching-style is the right style for you.

- A free site, Merge PDF, for merging multiple PDFs into one. I've used this and it worked fine. There are other free ones on the web as well. Use whatever works for you.
In case you want it, this free [as of 21Dec2020]. site converts PDFs to PNGs.

JK Home page