CSc 144 — Discrete Mathematics for Computer Science I Spring 2023 (McCann)

http://u.arizona.edu/~mccann/classes/144

Homework #4

(50 points)

Due Date: March 3rd, 2023, at the beginning of class

_ Directions _____

- 1. This is an INDIVIDUAL assignment; do your own work! Submitting answers created by computers or by other people is NOT doing your own work.
- 2. Start early! Getting help is much easier n days before the due date/time than it will be n hours before.
- 3. Write complete answers to each of the following questions, in accordance with the given directions. <u>Create</u> your solutions as a PDF document such that each answer is clearly separated from neighboring answers, to help the TAs easily read them. Show your work, when appropriate, for possible partial credit.
- 4. The questions that have section numbers are found in the Rosen text, available via D2L. Note that "(w,z)" is asking you to complete parts w and z only, not parts x and y.
- 5. If you have questions about any aspect of this assignment, help is available from the class staff via piazza.com and our office hours.
- 6. When your answers are ready to be turned in, do so on gradescope.com. Be sure to assign pages to problems after you upload your PDF. Need help? Visit https://help.gradescope.com/ and search for "Submitting an Assignment."
- 7. Solutions submitted more than five minutes late will cost you a late day. Submissions more than 24 hours late are worth no points.

Section 1.6: Rules of Inference:

- 1. (4 points) Section 1.6, 4(a,e)
- 2. (2 points) Section 1.6, 8
- 3. (6 points) Section 1.6, 10(d,f)
- 4. (4 points) Section 1.6, 14(a)
- 5. (4 points) Section 1.6, 16(a,b)
- 6. (2 points) Section 1.6, 20(b)
- 7. (4 points) Section 1.6, 24. Identify two errors.

Section 1.7: Introduction to Proofs:

- 8. (6 points) Section 1.7, 4
- 9. (6 points) Section 1.7, 6
- 10. (6 points) Section 1.7, 10

Section 1.8: Proof Methods and Strategy:

11. (6 points) Section 1.8, 2