Practice Homework #3

$\Longrightarrow$ (☐0 points) $\Longleftarrow$

"Due" Date: November 14/15, 2023, in SI Meetings

Directions

Because we have an exam in a week, there's not enough time to have a real homework graded and returned before the exam. However, we're confident that you will benefit from working some problems on recently–introduced material that will be covered by the exam, even if we do not collect your answers. Thus, we offer this *uncollected, ungraded* homework. We recommend that you treat it as you would a regular homework: Write complete answers to all of the questions, do your own work, and show that work, when appropriate. The TAs will entertain questions on these problems during SI sessions (and in office hours, of course).

Incentive: As encouragement to work through these problems, I'll select one of them to be on the exam. Should be easy points . . . if you do this 'homework!'

Section 1.7 — Introduction to Proofs (extra practice on Contraposition/Contradiction/Biconditional):

1. Section 1.7, 15

2. Section 1.7, 17

3. Section 1.7, 29

Section 4.1 — Divisibility and Modular Arithmetic:

4. Section 4.1, 15(a)

5. Section 4.1, 17(a)

6. Section 4.1, 23

7. Section 4.1, 31(b,c)

8. Section 4.1, 33

Section 2.4 — Sequences and Summations:

9. Section 2.4, 3(b,d)

10. Section 2.4, 7. (Stuck? Consider repeating sequences. Or, try using the OEIS (https://oeis.org)! Click on "Format: short" in the yellow bar at the top of the search results to hide the clutter.)

11. Section 2.4, 25(b,d,f)

12. Section 2.4, 33(b,c). (Just some review!)

Section 2.5 — Cardinality of Sets:

13. Section 2.5, 3(a,c)

14. Section 2.5, 11(all)

15. Section 2.5, 17