

Practice Homework #3

⇒ (points) ⇐

“Due” Date: November 20, 2024, in the review session

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 2.3 — Functions

1. Section 2.3, 11(abc)
2. Section 2.3, 17(ac)
3. Section 2.3, 21(ab)
4. Section 2.3, 23(bc)
5. Section 2.3, 29
6. Section 2.3, 53(a)

Section 1.7 — Introduction to Proofs

Section 1.7 covers Direct Proofs as well as both of the ‘contra’ proofs. For the non-biconditional conjectures, write ‘contra’ proofs. For the biconditionals, sometimes a direct proof is a good choice for one direction or the other of a biconditional proof; mixing proof types is fine in that situation, as you’re really writing two distinct proofs. When the question does not specify a proof technique to use, try doing the proof with each of the ‘contra’ proof techniques for extra practice!

7. Section 1.7, 11
8. Section 1.7, 13
9. Section 1.7, 17
10. Section 1.7, 19(all)
11. Section 1.7, 25
12. Section 1.7, 29
13. Section 1.7, 41