

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

Practice Homework #2

⇒ (0 points) ⇐

“Due” Date: March 21/22, 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 9.1 — Relations and Their Properties:

1. Section 9.1, 33
2. Section 9.1, 37(d)
3. Section 9.1, 51

Section 9.3 — Representing Relations:

4. Section 9.3, 19(a,c)
5. Section 9.3, 27
6. Section 9.3, 33

Section 9.5 — Equivalence Relations:

7. Section 9.5, 1(a,c)
8. Section 9.5, 5
9. Section 9.5, 11. Examples 5 and 10 in this section are based on bit-strings, too.
10. Section 9.5, 13
11. Section 9.5, 25. Write it as a complete direct proof!
12. Section 9.5, 29.
13. Section 9.5, 41(a,b,d)

(Continues on the back . . .)

Section 9.6 — Partial Orderings:

For each of the following questions that ask about partial orders and/or posets, for those relations that are partial orders, which kind of partial order (reflexive/weak or irreflexive/strict) are they, and are they also total orders?

14. Section 9.6, 1(d,e)
15. Section 9.6, 3(a,c)
16. Section 9.6, 9
17. Section 9.6, 11
18. Section 9.6, 15(a,b)