

In past terms this was part of a "real" assignment 1 that I have collected and graded. It was called HW1. But these problems are about prerequisite material, not 474 material. So I decided that it is not reasonable to **require** students to spend time writing up this. If you work on it, I am happy to assist you.

You need to know this material, and it could appear on the exams. I have posted solutions on Moodle, so that you can check your work, and I will be happy to talk with you if you can't do some problems or understand solutions.

Ignore the parts about points and turnin. There are no points and there is no turnin. There is a separate file (linked from the schedule page) that contains the actual problem statements from the textbook.

In the past, a few students have struggled with the use of quantifiers in this assignment. If the brief introduction to quantifiers in Rich's Appendix A is not sufficient, you may want to review sections 2.4 and 2.5 of Grimaldi's Discrete Math book

A.1 means Exercise 1 from Appendix A

Key to parenthesized expressions after problem numbers:

(No parentheses) Not required to be turned in. Just be sure that you can do it.

(t -7) Turn it in for a grade, worth 7 points (multi-part problems may have multiple point values)

(p-12) Turn it in for a grade; also be prepared to present it in class; worth 12 points.

1. A.1
2. A.2
3. A.4
4. A.5 (see note below)
5. A.6
6. A.7
7. A.8
8. A.9
9. A.11
10. A.12
11. A.13
12. A.14
13. A.15
14. A.17
15. A.18
16. A.19
17. A.20

A14d: She should have said "the set of finite sets under ..." I.e., is the Cartesian product of two finite sets always a finite set?

Note on problem A.5: In line 3, it says, "Define the following predicates over those sets."

A clearer statement would be "Assume that the following predicates over those sets have been defined."

That part of the problem is not asking you to do anything; instead it is giving you the building blocks to use for what you are supposed to do, which is parts a and b.