

Some examples of questions to ask yourself while reading the book

Example 3, p. 10. When you encounter phrases like “it is easy to choose” fill in the details. How do you choose a, b, c, d ? Similarly, in Example 5, on p. 11, find a function g .

Example 4, p. 10. Is the range all symmetric 2×2 matrices?

Example 6, p. 13. What are some examples where $f \circ g = g \circ f$?

Proof of Theorem 1.3.5, p. 17. The end of the proof requires (b) and (c) of problem 3 (which wasn't assigned). How can you prove these?

Problem 9, p. 20 (not assigned): Yes or no is not a sufficient answer to a problem. You would need to prove your answer.

Comments on Assignment 1

Comment on section 1.1 In this section, you can't assume facts you've known forever about arithmetic. You have to prove everything from

- (P1)-(P9) (field axioms)
- (O1)-(O5) (order properties)
- propositions in the section (which are proved using field axioms and order properties)

Section 1.4 #12 Each part depends on the previous part. In (a) what kind of series is on the right side? You can sum this series.