

You may use any material in the book up to the point where the problem appears (including earlier problems)

page 11 [chapter 1, section 1], number 3

[Prove 1.2(b), on page 10]

Problem:

Show  $A \cap (B - C) = (A \cap B) - (A \cap C)$

page 11 [chapter 1, section 1], number 4

Problem:

Show  $\ominus$  is associative

page 12 [chapter 1, section 2], number 1

Problem:

Show there is a "definable" subset  $t$  of  $C$  such that not  $t \in C$

page 14 [chapter 1, section 3], number 2

[Prove 3.1(b), on page 13]

Problem:

Show  $B \cup \bigcap_{i \in I} A_i = \bigcap_{i \in I} (B \cup A_i)$

page 16 [chapter 1, section 4], number 3

[Prove 4.2(d), on page 16 itself, immediately above the problems]

Problem:

Prove  $(A \cap B) \times (C \cap D) = (A \times C) \cap (B \times D)$

page 20, number 6

Problem:

Show  $R \mid \bigcup_{i \in I} S_i = \bigcup_{i \in I} R \mid S_i$