Why

Here are some exercises on sets.[1]

Exercise 1. *Let A, B, C denote sets. Show $((A \cap B) \cup C = A \cap (B \cup C)) \longleftrightarrow (C \subset A)$ Observe that the condition does not involve B.*

Exercise 2.

$$A - B = A \cap B'.$$

Exercise 3.

$$A \subset B \text{ if and only if} A - B = \varnothing.$$

Exercise 4.

$$A - (A - B) = A \cap B.$$

Exercise 5.

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

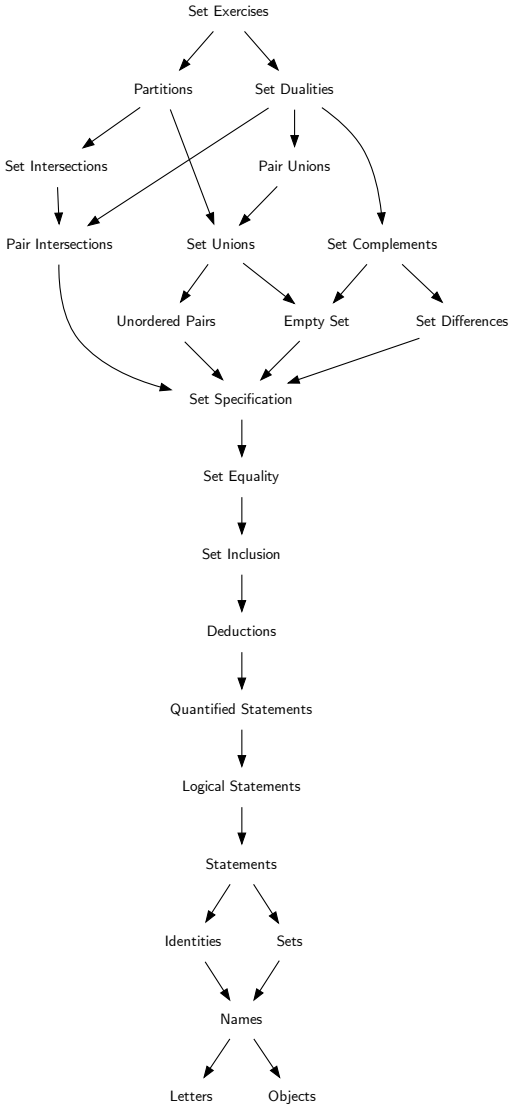
Exercise 6.

$$(A \cap B) \subset ((A \cap C) \cup (A \cap C')).$$

Exercise 7.

$$((A \cup C) \cap (B \cup C')) \subset (A \cup B).$$

[1] Future editions will give the hypotheses more clearly.


Set Exercises
Partitions
Set Dualities
Set Intersections
Pair Unions
Pair Intersections
Set Unions
Set Complements
Unordered Pairs
Empty Set
Set Differences
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects