

Notes on Modal Logic

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Textbook: the [Blue Book](#)

Recommendation: Davey and Priestley, *Introduction to Lattices and Order*, CUP second edition, 2002.

陈老师教授的方法论:

Definition....
⋮
Example....
⋮
Proposition...
⋮
Lemma...
⋮
Theorem...
⋮
Corollary...
⋮

Table 1: 一般文章的结构

中间的内容一般是说明性的，或者是过渡段。但有时候这些内容也会影响对概念的理解。

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1 Basic Concepts

1.1 relational structures

定义 1.1 (relational structures). A **relational structure** is a tuple $\mathfrak{F} = (W, R_i)_{i \in I}$, where $W \neq \emptyset$ and R_i is a relation on W for each $i \in I$, moreover $I \neq \emptyset$, namely \mathfrak{F} contains at least one relation. \dashv

Note: R_i can with arbitrary arity.

For relational structure (W, R) :

- strict partial order:
- linear order (total order):
- partial order:
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定义 1.2 ((reflexive) transitive closure). 内容... \dashv