

$$\begin{aligned}
 \textit{Sentence} &\rightarrow \textit{AtomicSentence} \mid \textit{ComplexSentence} \\
 \textit{AtomicSentence} &\rightarrow \textit{True} \mid \textit{False} \mid P \mid Q \mid R \mid \dots \\
 \textit{ComplexSentence} &\rightarrow (\textit{Sentence}) \mid [\textit{Sentence}] \\
 &\mid \neg \textit{Sentence} \\
 &\mid \textit{Sentence} \wedge \textit{Sentence} \\
 &\mid \textit{Sentence} \vee \textit{Sentence} \\
 &\mid \textit{Sentence} \Rightarrow \textit{Sentence} \\
 &\mid \textit{Sentence} \Leftrightarrow \textit{Sentence}
 \end{aligned}$$

OPERATOR PRECEDENCE : $\neg, \wedge, \vee, \Rightarrow, \Leftrightarrow$

Figure 7.7 A BNF (Backus–Naur Form) grammar of sentences in propositional logic, along with operator precedences, from highest to lowest.