

## 作业-4

在ND中证明：

$$(1) \quad \vdash_{ND} (\neg A \rightarrow A) \rightarrow A$$

$$(3) \quad \vdash_{ND} ((A \vee B) \rightarrow C) \leftrightarrow (A \rightarrow C) \wedge (B \rightarrow C)$$

$$(5) \quad \vdash_{ND} \neg(A \rightarrow B) \leftrightarrow A \wedge \neg B$$

$$(7) \quad \vdash_{ND} (A \wedge B) \leftrightarrow A \wedge (\neg A \vee B)$$