

Example: $\vdash \sim B \rightarrow (B \rightarrow A)$

$$(1) \sim B \rightarrow (\sim A \rightarrow \sim B) \quad (L1)$$

$$(2) (\sim A \rightarrow \sim B) \rightarrow (B \rightarrow A) \quad (L3)$$

$$(3) ((\sim A \rightarrow \sim B) \rightarrow (B \rightarrow A)) \rightarrow (\sim B \rightarrow ((\sim A \rightarrow \sim B) \rightarrow (B \rightarrow A))) \quad (L1)$$

$$(4) \sim B \rightarrow ((\sim A \rightarrow \sim B) \rightarrow (B \rightarrow A)) \quad MP(2)(3)$$

$$(5) (\sim B \rightarrow (\sim A \rightarrow \sim B)) \rightarrow (B \rightarrow A) \rightarrow ((\sim B \rightarrow (\sim A \rightarrow \sim B)) \rightarrow (\sim B \rightarrow (B \rightarrow A))) \quad (L2)$$

$$(6) (\sim B \rightarrow (\sim A \rightarrow \sim B)) \rightarrow (\sim B \rightarrow (B \rightarrow A)) \quad MP(4)(5)$$

$$(7) \sim B \rightarrow (B \rightarrow A) \quad MP(1)(6)$$