

1. Let A and B be formulas, and Γ a set of formulas. Suppose there is a one-line formal proof of $\Gamma, A \vdash B$. Show, without resorting to the Deduction Theorem, that $\Gamma \vdash A \rightarrow B$.
2. Let A and B be formulas, and Γ a set of formulas. Suppose there is a two-line formal proof of $\Gamma, A \vdash B$. Show, without resorting to the Deduction Theorem, that $\Gamma \vdash A \rightarrow B$.
3. Let A and B be formulas, and Γ a set of formulas. Suppose there is a three-line formal proof of $\Gamma, A \vdash B$. Show, without resorting to the Deduction Theorem, that $\Gamma \vdash A \rightarrow B$.