Summary of the rules of structured proof. *Discrete Maths I: slides 87–104*

	Introduction rules	*Elimination rules*
$\wedge$	... $l.$ P from ... ... $m.$ Q from ... ... $n.$ $P \wedge Q$ from l and m by $\wedge$-introduction (it doesn't matter in what order l and m are in)	... $m.$ $P \wedge Q$ from ... ... $n.$ P from m by $\wedge$-elimination or ... $m.$ $P \wedge Q$ from ... ... $n.$ Q from m by $\wedge$-elimination
$\vee$	... $m.$ P from ... ... $n.$ $P \vee Q$ from m by $\vee$-introduction or ... $m.$ Q from ... ... $n.$ $P \vee Q$ from m by $\vee$-introduction	$l.$ $P \vee Q$ from ... by ... ... $m_1.$ Assume P ... $m_2.$ R ... $n_1.$ Assume Q ... $n_2.$ R ... $o.$ R from l, m_1–m_2, n_1–n_2 by $\vee$-elimination (it doesn't matter what order l, m_1–m_2, and n_1–n_2 are in)
$\Rightarrow$	... $m.$ Assume P ... $n.$ Q from ... by ... $n+1.$ $P \Rightarrow Q$ from m–n, by $\Rightarrow$-introduction	... $l.$ $P \Rightarrow Q$ by ... ... $m.$ P by ... ... $n.$ Q from l and m by $\Rightarrow$-elimination
$\neg$	... $m.$ Assume P ... $n.$ F from ... by ... $n+1.$ $\neg P$ from m–n, by $\neg$-introduction	... $l.$ P by ... ... $m.$ $\neg P$ by ... ... $n.$ F from l and m by $\neg$-elimination
T	... $n.$ T	*No elimination rule for True.*
F	*No introduction rule for False.*	... $m.$ F from ... by ... ... $n.$ P from m, by contradiction
$\forall$	... $m.$ Consider an arbitrary x (from domain ...) ... $n.$ $P(x)$ by ... $n+1.$ $\forall\, x.P(x)$ from m–n by $\forall$-introduction	... $m.$ $\forall\, x.P(x)$ from ... ... $n.$ $P(v)$ from m by $\forall$-elimination
$\exists$	... $m.$ $P(v)$ ... $n.$ $\exists\, x.P(x)$ from m by $\exists$-introduction with witness $x = v$	$l.$ $\exists\, x.P(x)$ ... $m.$ For some actual x_1, $P(x_1)$ ... $n.$ Q (where x_1 not free in Q) ... $o.$ Q from l, m–n, by $\exists$-elimination
	... $m.$ Assume $\neg P$ ... $n.$ F from ... by ... $n+1.$ P from m–n, by contradiction	*(Proof by contradiction)*

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