

$$\begin{array}{c}
\frac{f; t \overset{\top}{\vdash} t;}{\top} R \rightarrow_+ \quad \frac{t; t \overset{t}{\vdash} t;}{\overset{t}{t}; \vdash (t \rightarrow t);} R \rightarrow_+ \\
\frac{f; \vdash (t \rightarrow t);}{\top} L \neg_- \quad \frac{t; \vdash (t \rightarrow t);}{\overset{t}{t}; \neg((t \rightarrow t)) \overset{t}{\vdash};} L \neg_- \\
\frac{f; \neg((t \rightarrow t)) \overset{\top}{\vdash};}{\top} L \vee_+ \quad \frac{t; \neg((t \rightarrow t)) \overset{t}{\vdash};}{\top \vee t} L \vee_+ \\
\frac{(\top \vee t)}{(f \vee t); \neg((t \rightarrow t)) \overset{(\top \vee t)}{\vdash};} R \neg_+ \\
\frac{(\top \vee t)}{(f \vee t); \overset{(\top \vee t)}{\vdash} \neg(\neg((t \rightarrow t)))};
\end{array}$$