

$$\begin{array}{c}
\frac{[a](b), [b](b); \quad \overset{[a](b)}{\vdash} \quad [a](b), [b](b);}{\text{Union}L} \\
\frac{[aUb](b); \quad \overset{[a](b)}{\vdash} \quad [a](b), [b](b);}{R\vee_+} \\
[aUb](b); \quad \overset{[a](b)}{\vdash} \quad ([a](b) \vee [b](b));
\end{array}$$