

Some Natural Deduction Proofs

$$\frac{\vdots}{((hj \Rightarrow (bij \Rightarrow bd)) \Rightarrow (hj \Rightarrow (bij \Rightarrow bd)))}$$

$$\frac{\vdots}{(hj \Rightarrow (bij \Rightarrow ((hj \Rightarrow (bij \Rightarrow bd)) \Rightarrow bd)))}$$

Some Natural Deduction Proofs

$$\frac{\begin{array}{c} \Xi_1 \\ ((\phi \vee \sigma) \wedge (\psi \vee \sigma)) \end{array} \quad \begin{array}{c} \Xi_2 \\ ((\phi \wedge \psi) \vee \sigma) \end{array}}{((\phi \wedge \psi) \vee \sigma) \equiv ((\phi \vee \sigma) \wedge (\psi \vee \sigma))} \equiv_R$$

Some Natural Deduction Proofs

$$\Xi_1 = \frac{\vdots}{((\phi \vee \sigma) \wedge (\psi \vee \sigma))}$$

Some Natural Deduction Proofs

$$\Xi_2 = \frac{\vdots}{((\phi \wedge \psi) \vee \sigma)}$$