A Gentzen kalkulus axiómasémája

$$\mathcal{A}, \Gamma \to \Delta, \mathcal{A}$$

A Gentzen kalkulus levezetési szabályai

$$(\to\supset)\quad \frac{\mathcal{A}, \Gamma \to \Delta, \mathcal{B}}{\Gamma \to \Delta, (\mathcal{A} \supset \mathcal{B})} \qquad (\supset\to)\quad \frac{\Gamma \to \Delta, \mathcal{A}; \quad \mathcal{B}, \Gamma \to \Delta}{(\mathcal{A} \supset \mathcal{B}), \Gamma \to \Delta}$$

$$(\to \wedge)\quad \frac{\Gamma \to \Delta, \mathcal{A}; \quad \Gamma \to \Delta, \mathcal{B}}{\Gamma \to \Delta, (\mathcal{A} \wedge \mathcal{B})} \qquad (\wedge \to)\quad \frac{\mathcal{A}, \mathcal{B}, \Gamma \to \Delta}{(\mathcal{A} \wedge \mathcal{B}), \Gamma \to \Delta}$$

$$(\to \vee)\quad \frac{\Gamma \to \Delta, \mathcal{A}, \mathcal{B}}{\Gamma \to \Delta, (\mathcal{A} \vee \mathcal{B})} \qquad (\vee \to)\quad \frac{\mathcal{A}, \Gamma \to \Delta; \quad \mathcal{B}, \Gamma \to \Delta}{(\mathcal{A} \vee \mathcal{B}), \Gamma \to \Delta}$$

$$(\to \neg)\quad \frac{\mathcal{A}, \Gamma \to \Delta}{\Gamma \to \Delta, \neg\mathcal{A}} \qquad (\neg \to)\quad \frac{\Gamma \to \Delta, \mathcal{A}}{\neg\mathcal{A}, \Gamma \to \Delta}$$

$$(\to \forall)\quad \frac{\Gamma \to \Delta, [\mathcal{A}_y^x]}{\Gamma \to \Delta, \forall x\mathcal{A}}\ y \notin Par(\Gamma \cup \Delta) \qquad (\forall \to)\quad \frac{\mathcal{A}(x||t), \forall x\mathcal{A}, \Gamma \to \Delta}{\forall x\mathcal{A}, \Gamma \to \Delta}$$

$$(\to \exists)\quad \frac{\Gamma \to \Delta, \mathcal{A}(x||t), \exists x\mathcal{A}}{\Gamma \to \Delta, \exists x\mathcal{A}} \qquad (\exists \to)\quad \frac{[\mathcal{A}_y^x], \Gamma \to \Delta}{\exists x\mathcal{A}, \Gamma \to \Delta}\ y \notin Par(\Gamma \cup \Delta)$$