

t131_relat_1
(TMNrhMd7MrFbxNEkYKi3tkbcP4a8DGryTPj)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(X2 = k8_relat_1 \\ X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(k4_tarski X3 X4 \in X0) \wedge \\ (X4 \in X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(X1 = k10_xtuple_0 X0) \Leftrightarrow (\forall X2.(X2 \in \\ X1) \Leftrightarrow (\exists X3.k4_tarski X3 X2 \in X0)) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((X0 \in k8_relat_1 \\ X2 X1) \Leftrightarrow (\exists X3.(X3 \in k10_xtuple_0 X2) \wedge ((k4_tarski X0 X3 \in X2) \wedge \\ (X3 \in X1)))) \end{aligned}$$