t9_relat_1 (TMPkTW-pEAVw7EGt7X9sMpVECmkrM68HFoY9)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski\ X0\ X1 = k4\_tarski\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k10\_xtuple\_0\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.k4\_tarski\ X3\ X2 \in X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k9\_xtuple\_0\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.k4\_tarski\ X2\ X3 \in X0)) \tag{4}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2) \Rightarrow ((X2 = k1\_tarski\ (k4\_tarski\ X0\ X1)) \Rightarrow ((k9\_xtuple\_0\ X2 = k1\_tarski\ X0) \wedge (k10\_xtuple\_0\ X2 = k1\_tarski\ X1)))$$