t8_grfunc_1 (TMFUFva9qnT3QzXusM3rYYzahsvPdnNgEf7)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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.

$$\forall X0.\forall X1.\forall X2.\forall X3.v1\_relat\_1\ (k2\_tarski\ (k4\_tarski\ X0\ X1)\ (k4\_tarski\ X2\ X3)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_funct\_1\ X0) \Leftrightarrow (\forall X1.\forall X2.\forall X3.((k4\_tarski\ X1\ X2 \in X0) \wedge (k4\_tarski\ X1\ X3 \in X0)) \Rightarrow (X2 = X3)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_relat\_1\ (k2\_tarski\ (k4\_tarski\ X0\ X1)\ (k4\_tarski\ X2\ X3))) \wedge (v1\_funct\_1\ (k2\_tarski\ (k4\_tarski\ X0\ X1)\ (k4\_tarski\ X2\ X3)))) \Leftrightarrow ((X0 = X2) \Rightarrow (X1 = X3))$$