t89_funct_1 (TMb7bYJ2xCV3ds7cX9SCMn8PFJ4B19Btqgh)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((\forall X1.\neg (X1 \in k10\_xtuple\_0\ X0) \wedge (\forall X2.k8\_relat\_1\ X0\ (k1\_tarski\ X1) \neq k1\_tarski\ X2)) \Leftrightarrow (v2\_funct\_1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((X0 \in k10\_xtuple\_0\ X1) \Leftrightarrow (k8\_relat\_1\ X1\ (k1\_tarski\ X0) \neq k1\_xboole\_0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ (k1\_tarski\ X1)) \Leftrightarrow ((X0 = k1\_xboole\_0) \vee (X0 = k1\_tarski\ X1)) \tag{3}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v2\_funct\_1\ X0) \Leftrightarrow (\forall X1.\exists X2.r1\_tarski\ (k8\_relat\_1\ X0\ (k1\_tarski\ X1))\ (k1\_tarski\ X2)))$$