t17_funct_1 (TMRDwWJdheNtz9J2tF4PEbUuY2o6oyMyJCJ)

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

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((k4\_tarski\ X0\ X1 \in X2) \Leftrightarrow ((X0 \in k9\_xtuple\_0\ X2) \wedge (X1 = k1\_funct\_1\ X2\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.k9\_xtuple\_0\ (k4\_relat\_1\ X0) = X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((X1 = k4\_relat\_1\ X0) \Leftrightarrow (\forall X2.\forall X3.(k4\_tarski\ X2\ X3 \in X1) \Leftrightarrow ((X2 \in X0) \wedge (X2 = X3)))) \tag{3}$$

Theorem 1

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