# t24_grfunc_1 (TMVhbh9MWwJh7vfH9YzhTvKtHuo1xewnZ1i)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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. Let $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k6\_relat\_1\ X1\ X2)) \Rightarrow (k1\_funct\_1\ (k6\_relat\_1\ X1\ X2)\ X0 = k1\_funct\_1\ X2\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k6\_relat\_1\ X1\ X2)) \Leftrightarrow ((X0 \in k9\_xtuple\_0\ X2) \wedge (k1\_funct\_1\ X2\ X0 \in X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((k4\_tarski\ X0\ X1 \in X2) \Leftrightarrow ((X0 \in k9\_xtuple\_0\ X2) \wedge (X1 = k1\_funct\_1\ X2\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((v1\_relat\_1\ (k6\_relat\_1\ X0\ X1)) \wedge (v1\_funct\_1\ (k6\_relat\_1\ X0\ X1))) \tag{4}$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((X0 \in k9\_xtuple\_0\ X2) \wedge (k1\_funct\_1\ X2\ X0 \in X1)) \Leftrightarrow (k4\_tarski\ X0\ (k1\_funct\_1\ X2\ X0) \in k6\_relat\_1\ X1\ X2))$$