

t22_grfunc_1
(TMd4eeu7Keme45dBskomSzX5QSiimwkC5vt)

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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 $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k5_relat_1 X0 (k9_xtuple_0 X0) = X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0) \Rightarrow (v1_relat_1 (k5_relat_1 X0 X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.\forall X2. \\ & ((X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (k4_tarski X1 X2 \in X0))) \wedge ((\neg X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((X2 = k5_relat_1 X0 X1) \Leftrightarrow (\forall X3.\forall X4.(k4_tarski X3 X4 \in X2) \Leftrightarrow ((X3 \in X1) \wedge (k4_tarski X3 X4 \in X0))))) \end{aligned} \quad (4)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (((X0 \in k9_xtuple_0 X2) \wedge (X0 \in X1)) \Leftrightarrow (k4_tarski X0 (k1_funct_1 X2 X0) \in k5_relat_1 X2 X1))$$