

t42_funct_4 (TMTzJL- rxtX9M1ebWrFLY5Fvh74Umn2W5TPr)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_funct_4 : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 = k4_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_4 X0)) \wedge (v1_funct_1 (k2_funct_4 X0))) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k2_funct_4 X0) \Leftrightarrow ((\forall X2. (X2 \in k9_xtuple_0 X1) \Leftrightarrow (\exists X3. \exists X4. (X2 = k4_tarski X4 X3) \wedge (k4_tarski X3 X4 \in k9_xtuple_0 X0))) \wedge (\forall X2. \forall X3. (k4_tarski X2 X3 \in k9_xtuple_0 X0) \Rightarrow (k1_binop_1 X1 X3 X2 = k1_binop_1 X0 X2 X3)))))) \end{aligned} \quad (3)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((k4_tarski X0 X1 \in k9_xtuple_0 X2) \Leftrightarrow (k4_tarski X1 X0 \in k9_xtuple_0 (k2_funct_4 X2)))$$