

t6_funct_3

(TMWxxr1kjvm9bGJWaR7SwmYe8h5XUVzqyTG)

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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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 \\ X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 \\ X1 X2)))) \Rightarrow (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k2_zfmisc_1 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow (\exists X4. \exists X5. (X4 \in X0) \wedge ((X5 \in X1) \wedge (X3 = k4_tarski \\ X4 X5)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ k1_binop_1 X0 X1 X2 = k1_funct_1 X0 (k4_tarski X1 X2)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \tag{5}$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ X2)) \Rightarrow (\forall X3. ((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow (((k9_xtuple_0 \\ X2 = k2_zfmisc_1 X0 X1) \wedge ((k9_xtuple_0 X3 = k2_zfmisc_1 X0 X1) \wedge (\forall X4. \\ \forall X5. ((X4 \in X0) \wedge (X5 \in X1)) \Rightarrow (k1_binop_1 X2 X4 X5 = k1_binop_1 \\ X3 X4 X5)))) \Rightarrow (X2 = X3))) \end{aligned}$$