

t20_funcop_1
(TMLxgbd3PVC7SsfA68akNz3D9kSKxKaFhcq)

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Let $k1_funcop_1 : \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1_funct_1 (k2_funcop_1 X0 X2) X1 = X2) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 X1) \wedge (\forall X2. (X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 X1 X2))) \Rightarrow (X0 = X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (r1_tarski (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarski X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k2_funcop_1 X0 X1)) \wedge (v1_funct_1 (k2_funcop_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k1_funcop_1 X0)) \wedge (v1_funct_1 (k1_funcop_1 X0))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\
& v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = k1_funcop_1 X0) \Leftrightarrow ((k9_xtuple_0 \\
& X1 = k9_xtuple_0 X0) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow ((\forall X3. \\
& \forall X4.(k1_funct_1 X0 X2 = k4_tarski X3 X4) \Rightarrow (k1_funct_1 X1 X2 = \\
& k4_tarski X4 X3)) \wedge (\neg(k1_funct_1 X0 X2 \neq k1_funct_1 X1 X2) \wedge (\forall X3. \\
& \forall X4.k1_funct_1 X0 X2 \neq k4_tarski X3 X4)))))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. k1_funcop_1 (k2_funcop_1 X0 \\
& (k4_tarski X1 X2)) = k2_funcop_1 X0 (k4_tarski X2 X1)
\end{aligned}$$