

t7_functor0
(TMdP5sBPHiapbSecuw68PS3XPfGV3CtBG6w)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k15_funct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ 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. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.(((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \Rightarrow (\forall X1.(((v1_relat_1\ X1) \wedge (v1_funct_1\ X1)) \Rightarrow (\forall X2.\forall X3.(k4_tarski\ X2\ X3 \in k2_zfmisc_1\ (k9_xtuple_0\ X0)\ (k9_xtuple_0\ X1)) \Rightarrow (k1_binop_1\ (k15_funct_3\ X0\ X1)\ X2\ X3 = k4_tarski\ (k1_funct_1\ X0\ X2)\ (k1_funct_1\ X1\ X3)))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 = k4_tarski\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \wedge ((v1_relat_1\ X1) \wedge (v1_funct_1\ X1))) \Rightarrow ((v1_relat_1\ (k15_funct_3\ X0\ X1)) \wedge (v1_funct_1\ (k15_funct_3\ X0\ X1))) \quad (4)$$

Assume the following.

$$\forall X0.(((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \Rightarrow (\forall X1.(((v1_relat_1\ X1) \wedge (v1_funct_1\ X1)) \Rightarrow (\forall X2.(((v1_relat_1\ X2) \wedge (v1_funct_1\ X2)) \Rightarrow ((X2 = k15_funct_3\ X0\ X1) \Leftrightarrow ((k9_xtuple_0\ X2 = k2_zfmisc_1\ (k9_xtuple_0\ X0)\ (k9_xtuple_0\ X1)) \wedge (\forall X3.\forall X4.((X3 \in k9_xtuple_0\ X0) \wedge (X4 \in k9_xtuple_0\ X1)) \Rightarrow (k1_binop_1\ X2\ X3\ X4 = k4_tarski\ (k1_funct_1\ X0\ X3)\ (k1_funct_1\ X1\ X4)))))))))) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Leftrightarrow \\ (\forall X1. \forall X2. ((X1 \in k9_xtuple_0 X0) \wedge ((X2 \in k9_xtuple_0 \\ X0) \wedge (k1_funct_1 X0 X1 = k1_funct_1 X0 X2))) \Rightarrow (X1 = X2))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ k1_binop_1 X0 X1 X2 = k1_funct_1 X0 (k4_tarski X1 X2)) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 (\\ k15_funct_3 X0 X0)) \Rightarrow (v2_funct_1 X0)) \end{aligned}$$