

t12_glib_000

(TMJ5PdZgHk9KBWX8MPKU8rVPHEsObEuomw8)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1. \forall X2. (v7_ordinal1 \\ X2) \Rightarrow (\forall X3. (v7_ordinal1 X3) \Rightarrow ((X2 \neq X3) \Rightarrow (k1_funct_1 X0 X3 = \\ k1_funct_1 (k13_glib_000 X0 X2 X1) X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1. \forall X2. (v7_ordinal1 \\ X2) \Rightarrow (k1_funct_1 (k13_glib_000 X0 X2 X1) X2 = X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1. \forall X2. (v7_ordinal1 \\ X2) \Rightarrow (k1_relset_1 k5_numbers (k13_glib_000 X0 X2 X1) = k2_xboole_0 \\ (k1_relset_1 k5_numbers X0) (k1_tarski X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \wedge (v7_ordinal1 \\ X1)) \Rightarrow ((v1_relat_1 (k13_glib_000 X0 X1 X2)) \wedge ((v4_relat_1 (k13_glib_000 \\ X0 X1 X2) k5_numbers) \wedge (v1_funct_1 (k13_glib_000 X0 X1 X2)) \wedge (v1_finset_1 \\ (k13_glib_000 X0 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1.\forall X2.\forall X3.(\\ v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow ((X3 \neq X4) \Rightarrow ((X3 \in \\ k1_relset_1 k5_numbers (k13_glib_000 (k13_glib_000 X0 X3 X1) X4 \\ X2)) \wedge ((X4 \in k1_relset_1 k5_numbers (k13_glib_000 (k13_glib_000 \\ X0 X3 X1) X4 X2)) \wedge ((k1_funct_1 (k13_glib_000 (k13_glib_000 X0 X3 \\ X1) X4 X2) X3 = X1) \wedge (k1_funct_1 (k13_glib_000 (k13_glib_000 X0 X3 \\ X1) X4 X2) X4 = X2)))))))) \end{aligned}$$