

l52_conlat_1

(TMPfo9SwmLeKKPD49xKPV9MBtZqgxPdK5MK)

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Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ be given. Let $v4_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_conlat_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\ (X1 \in k8_conlat_1 X0) \Leftrightarrow ((v4_conlat_1 X1 X0) \wedge ((\neg v5_conlat_1 X1 X0) \wedge \\ ((v7_conlat_1 X1 X0) \wedge (l2_conlat_1 X1 X0)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(\neg v1_subset_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(\neg v1_xboole_0 X1)) \quad (7)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow((v1_funct_1 \\ (k9_conlat_1 X0))\wedge((v1_funct_2 (k9_conlat_1 X0) (k2_zfmisc_1 \\ (k8_conlat_1 X0) (k8_conlat_1 X0)) (k8_conlat_1 X0))\wedge(m1_subset_1 \\ (k9_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k8_conlat_1 \\ X0) (k8_conlat_1 X0)) (k8_conlat_1 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.(X1 = \\ k10_xtuple_0 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.(X3 \in k9_xtuple_0 \\ X0)\wedge(X2 = k1_funct_1 X0 X3)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(X2 = k2_zfmisc_1 X0 X1)\Leftrightarrow(\forall X3. \\ (X3 \in X2)\Leftrightarrow(\exists X4.\exists X5.(X4 \in X0)\wedge((X5 \in X1)\wedge(X3 = k4_tarski \\ X4 X5)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))\Rightarrow(((X1 \neq k1_xboole_0)\Rightarrow((v1_funct_2 X2 X0 \\ X1)\Leftrightarrow(X0 = k1_relset_1 X0 X2)))\wedge((X1 = k1_xboole_0)\Rightarrow((v1_funct_2 \\ X2 X0 X1)\Leftrightarrow(X2 = k1_xboole_0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.\forall X2. k1_binop_1 X0 X1 X2 = k1_funct_1 X0 (k4_tarski X1 X2)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \Rightarrow (v1_xboole_0 X2)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (19)$$

Theorem 1

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. ((v4_conlat_1 X1 X0) \wedge (\neg v5_conlat_1 X1 X0) \wedge ((v7_conlat_1 X1 X0) \wedge (l2_conlat_1 X1 X0)))) \Rightarrow (\forall X2. ((v4_conlat_1 X2 X0) \wedge (\neg v5_conlat_1 X2 X0) \wedge ((v7_conlat_1 X2 X0) \wedge (l2_conlat_1 X2 X0)))) \Rightarrow (k1_binop_1 (k9_conlat_1 X0) X1 X2 \in k2_relset_1 (k8_conlat_1 X0) (k9_conlat_1 X0))))$$