

t47_pcs_0 (TMWfmMapXfqTwMBcE- joWWUqMmg7Y2jwLxi3)

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Let $l2_pcs_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k25_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_pcs_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g2_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k23_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v12_pcs_0 : \iota \Rightarrow o$ be given. Let $u1_pcs_0 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pcs_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. \forall X3. (k4_tarski \\ X2 X3 \in k24_pcs_0 X0 X1) \Leftrightarrow ((X2 \in X1) \wedge ((X3 \in X1) \wedge (\forall X4. (m1_subset_1 \\ X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. (m1_subset_1 X5 (u1_struct_0 \\ X0)) \Rightarrow (((X4 \in X2) \wedge (X5 \in X3)) \Rightarrow (r1_pcs_0 X0 X4 X5)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0)))) \Rightarrow (\forall X3. \forall X4. \forall X5. (g2_pcs_0 X0 X1 X2 = \\ g2_pcs_0 X3 X4 X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (l2_pcs_0 X0) \Rightarrow ((l1_orders_2 X0) \wedge (l1_pcs_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(l2_pcs_0 X0)\Rightarrow(l2_pcs_0 (k25_pcs_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(l1_pcs_0 X0)\Rightarrow(m1_subset_1 (k24_pcs_0 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X1 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (k23_pcs_0 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X1 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow((v12_pcs_0 (g2_pcs_0 X0 X1 X2))\wedge(l2_pcs_0 (g2_pcs_0 X0 X1 X2))) \quad (9)$$

Assume the following.

$$\forall X0.(l1_pcs_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_pcs_0 X0 X1 X2)\Leftrightarrow(k4_tarski X1 X2 \in u1_pcs_0 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (11)$$

Assume the following.

$$\forall X0.(l2_pcs_0 X0)\Rightarrow(\forall X1.k25_pcs_0 X0 X1 = g2_pcs_0 X1 (k23_pcs_0 X0 X1) (k24_pcs_0 X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0.(l2_pcs_0 X0)\Rightarrow((v12_pcs_0 X0)\Rightarrow(X0 = g2_pcs_0 (u1_struct_0 X0) (u1_orders_2 X0) (u1_pcs_0 X0))) \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.(l2_pcs_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 (k25_pcs_0 X0 X1)))\Rightarrow(\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 (k25_pcs_0 X0 X1)))\Rightarrow((\forall X4. \\ (m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(\forall X5.(m1_subset_1 X5 \\ (u1_struct_0 X0))\Rightarrow(((X4 \in X2)\wedge(X5 \in X3))\Rightarrow(r1_pcs_0 X0 X4 X5))))))\Rightarrow \\ (r1_pcs_0 (k25_pcs_0 X0 X1) X2 X3)))) \end{aligned}$$