

t24_pcs_0
(TML6r9LUzvRikj1ZRnHBBJ4Qm7gKxDN9dpB)

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Let $l2_pcs_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k19_pcs_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $l1_pcs_0 : \iota \Rightarrow o$ be given. Let $v12_pcs_0 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pcs_0 : \iota \Rightarrow \iota$ 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.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ X2))) \Rightarrow (m1_subset_1\ X0\ X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ (k1_tarski\ X2)\ X3) \Leftrightarrow ((X0 = X2) \wedge (X1 \in X3)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1_xboole_0\ X0) \Rightarrow (\neg v1_xboole_0\ (k2_xboole_0\ X1\ X0)) \quad (6)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarSKI X0) \quad (7)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (8)$$

Assume the following.

$$\forall X0. (l2_pcs_0 X0) \Rightarrow ((l1_orders_2 X0) \wedge (l1_pcs_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (l2_pcs_0 X0) \Rightarrow ((v12_pcs_0 (k19_pcs_0 X0 X1)) \wedge (l2_pcs_0 (k19_pcs_0 X0 X1))) \quad (10)$$

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.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X2) \Leftrightarrow (k4_tarSKI X1 X2 \in u1_orders_2 X0)))) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (13)$$

Assume the following.

$$\forall X0. (l2_pcs_0 X0) \Rightarrow (\forall X1. \forall X2. ((v12_pcs_0 X2) \wedge (l2_pcs_0 X2)) \Rightarrow ((X2 = k19_pcs_0 X0 X1) \Leftrightarrow ((u1_struct_0 X2 = k2_xboole_0 (k1_tarSKI X1) (u1_struct_0 X0)) \wedge ((u1_orders_2 X2 = k2_xboole_0 (k2_zfmisc_1 (k1_tarSKI X1) (u1_struct_0 X2)) (u1_orders_2 X0)) \wedge (u1_pcs_0 X2 = k2_xboole_0 (k2_xboole_0 (k2_zfmisc_1 (k1_tarSKI X1) (u1_struct_0 X2)) (k2_zfmisc_1 (u1_struct_0 X2) (k1_tarSKI X1))) (u1_pcs_0 X0)))))) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l2_pcs_0 X0) \Rightarrow (\forall X1.\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & (k19_pcs_0 X0 X1))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & (k19_pcs_0 X0 X1))) \Rightarrow (((X2 = X3) \wedge (r1_orders_2 (k19_pcs_0 X0 X1) \\ & X3 X4)) \Rightarrow ((X2 = X1) \vee ((X1 \in u1_struct_0 X0) \vee ((X4 \in u1_struct_0 X0) \wedge \\ & (X4 \neq X1)))))))))) \end{aligned}$$