

t53_yellow_0
(TMTF11hjHPBi5JY6fugv5q8SzdH7jmHA vSj)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ 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 $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & ((r1_yellow_0 X0 X1) \Rightarrow (r1_yellow_0 X0 (k3_xboole_0 X1 (u1_struct_0 \\ & X0)))) \wedge (((r1_yellow_0 X0 (k3_xboole_0 X1 (u1_struct_0 X0))) \Rightarrow \\ & (r1_yellow_0 X0 X1)) \wedge (((r2_yellow_0 X0 X1) \Rightarrow (r2_yellow_0 X0 (k3_xboole_0 \\ & X1 (u1_struct_0 X0)))) \wedge ((r2_yellow_0 X0 (k3_xboole_0 X1 (u1_struct_0 \\ & X0))) \Rightarrow (r2_yellow_0 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (r1_yellow_0 X0 X1) \Leftrightarrow \\ & (\exists X2. (m1_subset_1 X2 (u1_struct_0 X0)) \wedge ((r2_lattice3 \\ & X0 X1 X2) \wedge ((\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 \\ & X0 X1 X3) \Rightarrow (r1_orders_2 X0 X2 X3))) \wedge (\forall X3. (m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (((r2_lattice3 X0 X1 X3) \wedge (\forall X4. (m1_subset_1 \\ & X4 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X1 X4) \Rightarrow (r1_orders_2 X0 X3 \\ & X4)))) \Rightarrow (X3 = X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0)\Rightarrow((v3_lattice3 X0)\Leftrightarrow(\forall X1.\exists X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\wedge((r2_lattice3 X0 X1 X2)\wedge(\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow((r2_lattice3 X0 X1 X3)\Rightarrow(r1_orders_2 \\ X0 X2 X3)))))) \quad (6) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow((\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(r1_yellow_0 \\ X0 X1))\Rightarrow(v3_lattice3 X0)) \end{aligned}$$