

t5_yellow10 (TMEiJHn- mvdCM8rVdzTSR6KdwAXRehoQfKk6)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ 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 $k3_yellow_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_yellow_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_yellow_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_yellow_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_yellow_0 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v5_orders_2 \\ & X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 X1)))) \Rightarrow (k3_yellow_0 (k3_yellow_3 \\ & X0 X1) = k7_yellow_3 X0 X1 (k3_yellow_0 X0) (k3_yellow_0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 \\ & X1)))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_yellow_3 X0 X1)))))) \Rightarrow (((v3_lattice3 (k3_yellow_3 \\ & X0 X1)) \vee (r1_yellow_0 (k3_yellow_3 X0 X1) X2)) \Rightarrow (k1_yellow_0 (k3_yellow_3 \\ & X0 X1) X2 = k7_yellow_3 X0 X1 (k1_yellow_0 X0 (k4_yellow_3 X0 X1 X2)) \\ & (k1_yellow_0 X1 (k5_yellow_3 X0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l1_orders_2 X0) \wedge ((l1_orders_2 \\ & X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_3 X0 \\ & X1)))))) \Rightarrow (k5_yellow_3 X0 X1 X2 = k10_xtuple_0 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_orders_2 X0)\wedge((l1_orders_2 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_3 X0 X1))))))\Rightarrow(k4_yellow_3 X0 X1 X2 = k9_xtuple_0 X2) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_xboole_0 (k10_xtuple_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_xboole_0 (k9_xtuple_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((l1_orders_2 X0)\wedge(l1_orders_2 X1))\Rightarrow((v1_orders_2 (k3_yellow_3 X0 X1))\wedge(l1_orders_2 (k3_yellow_3 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(k3_yellow_0 X0 = k1_yellow_0 X0 k1_xboole_0) \quad (9)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v5_orders_2 X0)\wedge((v1_yellow_0 X0)\wedge(l1_orders_2 X0))))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v5_orders_2 X1)\wedge((v1_yellow_0 X1)\wedge(l1_orders_2 X1))))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k3_yellow_3 X0 X1))))\Rightarrow(((v3_lattice3 (k3_yellow_3 X0 X1))\vee(r1_yellow_0 (k3_yellow_3 X0 X1) X2))\Rightarrow(k1_yellow_0 (k3_yellow_3 X0 X1) X2 = k7_yellow_3 X0 X1 (k1_yellow_0 X0 (k4_yellow_3 X0 X1 X2)) (k1_yellow_0 X1 (k5_yellow_3 X0 X1 X2))))))$$