

t46_yellow_5

(TMco3MD6pgrbjEda1sRLk5TzpxxBY2YfzPEP)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_waybel_1 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_yellow_0 : \iota \Rightarrow \iota$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_waybel_1 : \iota \Rightarrow o$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $v10_waybel_1 : \iota \Rightarrow o$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_yellow_0 \\ &X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ &X0)) \Rightarrow (((v2_lattice3 X0) \Rightarrow (k11_lattice3 X0 (k3_yellow_0 X0) X1 = \\ &k3_yellow_0 X0)) \wedge (((v1_lattice3 X0) \wedge ((v3_orders_2 X0) \wedge (v4_orders_2 \\ &X0))) \Rightarrow (k10_lattice3 X0 (k3_yellow_0 X0) X1 = X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 \\ &X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ &(u1_struct_0 X0)) \Rightarrow ((X3 = k12_lattice3 X0 X1 X2) \Leftrightarrow ((r1_orders_2 \\ &X0 X3 X1) \wedge ((r1_orders_2 X0 X3 X2) \wedge (\forall X4. (m1_subset_1 X4 (\\ &u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X4 X1) \wedge (r1_orders_2 X0 X4 X2)) \Rightarrow \\ &(r1_orders_2 X0 X4 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ &X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow ((r3_orders_2 X0 X2 X1) \Rightarrow (k12_lattice3 X0 X1 X2 = X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow((r3_orders_2 X0 X1 X2)\Leftrightarrow(r1_orders_2 X0 X1 X2)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k13_lattice3 X0 X1 X2 = k10_lattice3 X0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0)\wedge((v2_lattice3 X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k12_lattice3 X0 X1 X2 = k11_lattice3 X0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (k3_yellow_0 X0) (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k13_lattice3 X0 X1 X2) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow((v2_waybel_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(k11_lattice3 X0 X1 (k10_lattice3 X0 X2 X3) = k10_lattice3 X0 (k11_lattice3 X0 X1 X2) (k11_lattice3 X0 X1 X3)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge(l1_orders_2 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k13_lattice3 X0 X1 X2 = k13_lattice3 X0 X2 X1) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v5_orders_2\ X0)\wedge((v2_lattice3 \\ X0)\wedge(l1_orders_2\ X0)))\wedge((m1_subset_1\ X1\ (u1_struct_0\ X0))\wedge(\\ m1_subset_1\ X2\ (u1_struct_0\ X0))))\Rightarrow(k12_lattice3\ X0\ X1\ X2 = k12_lattice3 \\ X0\ X2\ X1) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2\ X0)\Rightarrow(((\neg v2_struct_0\ X0)\wedge(v11_waybel_1 \\ X0))\Rightarrow((\neg v2_struct_0\ X0)\wedge((v3_orders_2\ X0)\wedge((v4_orders_2\ X0)\wedge \\ ((v5_orders_2\ X0)\wedge((v1_lattice3\ X0)\wedge((v2_lattice3\ X0)\wedge((v3_yellow_0 \\ X0)\wedge((v2_waybel_1\ X0)\wedge(v10_waybel_1\ X0)))))))))) \end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0)\Rightarrow((v3_yellow_0\ X0)\Rightarrow((v1_yellow_0 \\ X0)\wedge(v2_yellow_0\ X0))) \tag{13}$$

Theorem 1

$$\begin{aligned} \forall X0.(((\neg v2_struct_0\ X0)\wedge((v11_waybel_1\ X0)\wedge(l1_orders_2 \\ X0)))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2. \\ (m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3 \\ (u1_struct_0\ X0))\Rightarrow(((r3_orders_2\ X0\ X1\ (k13_lattice3\ X0\ X2\ X3))\wedge \\ (k12_lattice3\ X0\ X1\ X3 = k3_yellow_0\ X0))\Rightarrow(r3_orders_2\ X0\ X1\ X2)))))) \end{aligned}$$