

t43_yellow_5 (TMX- Cep7CZ2ghaHLKeyobJrZCugEMY5Rp7WV)

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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 $k1_yellow_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_0 : \iota \Rightarrow \iota$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_waybel_1 : \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v11_waybel_1 X0) \wedge (l1_orders_2 \\ &X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((k12_lattice3 \\ &X0 X1 (k7_waybel_1 X0 X1) = k3_yellow_0 X0) \wedge (k13_lattice3 X0 X1 (\\ &k7_waybel_1 X0 X1) = k4_yellow_0 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(v5_orders_2 X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 \\ &X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ &(u1_struct_0 X0)) \Rightarrow ((v4_orders_2 X0) \Rightarrow (k11_lattice3 X0 (k11_lattice3 \\ &X0 X1 X2) X3 = k11_lattice3 X0 X1 (k11_lattice3 X0 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v2_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((r3_orders_2 X0 X2 X1) \Rightarrow (k12_lattice3 X0 X1 X2 = X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v5_orders_2 X0) \wedge ((v2_lattice3 \\ X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k12_lattice3 X0 X1 X2 = k11_lattice3 \\ X0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \wedge \\ (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k7_waybel_1 \\ X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_orders_2 \\ X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ X0)))) \Rightarrow (m1_subset_1 (k1_yellow_5 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (k1_yellow_5 X0 X1 X2 = k11_lattice3 X0 X1 (k7_waybel_1 \\ X0 X2)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v5_orders_2 X0) \wedge ((v2_lattice3 \\ X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k12_lattice3 X0 X1 X2 = k12_lattice3 \\ X0 X2 X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v11_waybel_1 \\ X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge \\ ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_yellow_0 \\ X0) \wedge ((v2_waybel_1 X0) \wedge (v10_waybel_1 X0)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow ((v3_yellow_0 X0) \Rightarrow ((v1_yellow_0 \\ X0) \wedge (v2_yellow_0 X0))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v11_waybel_1 X0) \wedge (l1_orders_2 \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_orders_2 X0 X1 (k1_yellow_5 \\ X0 X2 X1)) \Rightarrow (X1 = k3_yellow_0 X0)))) \end{aligned}$$