

t37_yellow_7 (TMXZ-
ZPu7MkXsHtAf9jkUCLP62B8N5tJzYGL)

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Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ 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 $k7_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_lattice3 : \iota \Rightarrow \iota$ be given. Let $k8_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $r6_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Let $v2_waybel_1 : \iota \Rightarrow o$ be given. Let $v10_waybel_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_yellow_0 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r6_waybel_1 \\ & X0 X1 X2) \Leftrightarrow (r6_waybel_1 (k7_lattice3 X0) (k8_lattice3 X0 X1) (k8_lattice3 \\ & X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v11_waybel_1 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r6_waybel_1 \\ & X0 X1 X2) \Leftrightarrow (X2 = k7_waybel_1 X0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((v1_yellow_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0) \wedge (v2_yellow_0 (k7_lattice3 X0))) \tag{3}$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v2_waybel_1 X0) \wedge (l1_orders_2 X0))))))) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v2_waybel_1 (k7_lattice3 X0))) \quad (4)$$

Assume the following.

$$\forall X0.((v1_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v2_lattice3 (k7_lattice3 X0))) \quad (5)$$

Assume the following.

$$\forall X0.((v2_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v1_lattice3 (k7_lattice3 X0))) \quad (6)$$

Assume the following.

$$\forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v5_orders_2 (k7_lattice3 X0))) \quad (7)$$

Assume the following.

$$\forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v4_orders_2 (k7_lattice3 X0))) \quad (8)$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v3_orders_2 (k7_lattice3 X0))) \quad (9)$$

Assume the following.

$$\forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_yellow_0 X0) \wedge ((v10_waybel_1 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v10_waybel_1 (k7_lattice3 X0))) \quad (10)$$

Assume the following.

$$\forall X0.((v2_yellow_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_orders_2 (k7_lattice3 X0)) \wedge (v1_yellow_0 (k7_lattice3 X0))) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((l1_orders_2 X0) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k8_lattice3 X0 X1) (u1_struct_0 (k7_lattice3 X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k7_waybel_1 X0 X1) (u1_struct_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_orders_2 (k7_lattice3 X0))\wedge(l1_orders_2 (k7_lattice3 X0))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k8_lattice3 X0 X1 = X1)) \quad (15)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge((v2_lattice3 X0)\wedge((v3_yellow_0 X0)\wedge((v2_waybel_1 X0)\wedge(v10_waybel_1 X0))))))))))\Rightarrow((\neg v2_struct_0 X0)\wedge(v11_waybel_1 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((((\neg v2_struct_0 X0)\wedge(v11_waybel_1 X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge((v2_lattice3 X0)\wedge((v3_yellow_0 X0)\wedge((v2_waybel_1 X0)\wedge(v10_waybel_1 X0)))))))))) \quad (17)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(((v1_yellow_0 X0)\wedge(v2_yellow_0 X0))\Rightarrow(v3_yellow_0 X0)) \quad (18)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v3_yellow_0 X0)\Rightarrow((v1_yellow_0 X0)\wedge(v2_yellow_0 X0))) \quad (19)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v1_lattice3 X0)\Rightarrow(\neg v2_struct_0 X0)) \quad (20)$$

Theorem 1

$$\forall X0.(((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge((v2_lattice3 X0)\wedge((v11_waybel_1 X0)\wedge(l1_orders_2 X0))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k7_waybel_1 (k7_lattice3 X0) (k8_lattice3 X0 X1) = k7_waybel_1 X0 X1))$$