

t24_yellow_5

(TMK7ao9Xa6fgjdccyK4jb6RP3S2SJqnP9nX)

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Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_yellow_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_yellow_0 : \iota \Rightarrow \iota$ be given. Let $r1_yellow_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r1_orders_2 \\ & X0 X1 X2) \wedge (k12_lattice3 X0 X2 X3 = k3_yellow_0 X0)) \Rightarrow (k12_lattice3 \\ & X0 X1 X3 = k3_yellow_0 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r2_yellow_5 X0 X1 X2) \Leftrightarrow (r1_yellow_5 \\ & X0 X1 X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k12_lattice3 X0 X1 X2 = k11_lattice3 \\ & X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_yellow_5 X0 X1 X2) \Leftrightarrow (k11_lattice3 X0 X1 \\ & X2 \neq k3_yellow_0 X0)))) \end{aligned} \tag{4}$$

Assume the following.

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

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r2_yellow_5 \\ & X0 X1 X2) \wedge (r1_orders_2 X0 X2 X3)) \Rightarrow (r2_yellow_5 X0 X1 X3)))))) \end{aligned}$$