

t32_yellow_5 (TMWxzWxb- fyFZVFCjw5M3s49Qa8uuMrdQvuq)

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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 $r1_yellow_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_yellow_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(\neg(r1_yellow_5 \\ & X0 X1 X2) \wedge (r1_yellow_5 X0 X1 X3)) \wedge (r1_yellow_5 X0 X1 (k12_lattice3 \\ & X0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r2_yellow_5 X0 X1 X2) \Leftrightarrow (r1_yellow_5 \\ & X0 X1 X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k12_lattice3 \\ & X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ & X0) \wedge ((v1_yellow_0 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(\neg r1_yellow_5 \\ & X0 X1 X2) \wedge (r1_yellow_5 X0 (k12_lattice3 X0 X1 X3) (k12_lattice3 \\ & X0 X2 X3)))))) \end{aligned}$$