

t11_yellow_0 (TMcfEsq- zoYV7AvFMycxLvu3vKB2ZD6Xw6oY)

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Let $v4_orders_2 : \iota \Rightarrow o$ 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 $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X2) \Rightarrow (\forall X3.((r1_lattice3 \\ & X0 X3 X2) \Rightarrow (r1_lattice3 X0 X3 X1)) \wedge ((r2_lattice3 X0 X3 X1) \Rightarrow (r2_lattice3 \\ & X0 X3 X2)))))) \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & \forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (((r2_lattice3 X0 X1 X2) \wedge (r1_orders_2 X0 \\ & X2 X3)) \Rightarrow (r2_lattice3 X0 X1 X3)))) \end{aligned}$$