

t2_yellow_7

(TMGrp1d8fJ3PcJayvorLwygbPz35FM1z3E8)

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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 $k7_lattice3 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k7_lattice3 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ (k7_lattice3 X0))) \Rightarrow ((r1_orders_2 (k7_lattice3 X0) X1 X2) \Leftrightarrow (r1_orders_2 \\ X0 (k9_lattice3 X0 X2) (k9_lattice3 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((l1_orders_2 X0) \wedge (m1_subset_1 X1 (u1_struct_0 \\ X0))) \Rightarrow (m1_subset_1 (k8_lattice3 X0 X1) (u1_struct_0 (k7_lattice3 \\ X0))) \quad (2)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k7_lattice3 X0))) \Rightarrow (k9_lattice3 X0 X1 = X1)) \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (k8_lattice3 X0 X1 = X1)) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k7_lattice3 X0))) \Rightarrow \\ (((r1_orders_2 X0 X1 (k9_lattice3 X0 X2)) \Rightarrow (r1_orders_2 (k7_lattice3 \\ X0) X2 (k8_lattice3 X0 X1))) \wedge (((r1_orders_2 (k7_lattice3 X0) X2 \\ (k8_lattice3 X0 X1)) \Rightarrow (r1_orders_2 X0 X1 (k9_lattice3 X0 X2))) \wedge \\ (((r1_orders_2 X0 (k9_lattice3 X0 X2) X1) \Rightarrow (r1_orders_2 (k7_lattice3 \\ X0) (k8_lattice3 X0 X1) X2)) \wedge ((r1_orders_2 (k7_lattice3 X0) (k8_lattice3 \\ X0 X1) X2) \Rightarrow (r1_orders_2 X0 (k9_lattice3 X0 X2) X1)))))) \end{aligned}$$