

t29_lattice3
(TMXjYza9VgKUzJvU271uyhzuB4dkbgS7iRD)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_lattice3 : \iota \Rightarrow \iota$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge \\ & (l3_lattices X1))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X1)) \Rightarrow ((r3_lattice3 X1 X2 X0) \Leftrightarrow (r1_lattice3 (k3_lattice3 X1) X0 \\ & (k4_lattice3 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge \\ & (l3_lattices X0))) \wedge (m1_subset_1 X1 (u1_struct_0 (k3_lattice3 \\ & X0)))) \Rightarrow (m1_subset_1 (k5_lattice3 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k3_lattice3 \\ & X0))) \Rightarrow (k5_lattice3 X0 X1 = X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k4_lattice3 \\ & X0 X1 = X1)) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge \\ & (l3_lattices X1))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & (k3_lattice3 X1))) \Rightarrow ((r1_lattice3 (k3_lattice3 X1) X0 X2) \Leftrightarrow (r3_lattice3 \\ & X1 (k5_lattice3 X1 X2) X0))) \end{aligned}$$