

t6_lattice5 (TMbAhmhnadpLmQLeVGfeoFwn- cAKUGFrWkDx)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_lattice5 : \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_lattice3 : \iota \Rightarrow \iota$ be given. Let $k4_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_msualg_5 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_lattice3 : \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_lattices X0 X1 X2) \Leftrightarrow (r3_orders_2 \\ & (k3_lattice3 X0) (k4_lattice3 X0 X1) (k4_lattice3 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k2_msualg_5 \\ & X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k2_msualg_5 \\ & X0))) \Rightarrow ((r3_lattices (k2_msualg_5 X0) X1 X2) \Leftrightarrow (r1_tarski X1 X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))) \Rightarrow (\forall X2. \forall X3. (g1_orders_2 X0 X1 = g1_orders_2 \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 (k2_msualg_5 X0)) \wedge ((v3_lattices (k2_msualg_5 \\ & X0)) \wedge ((v10_lattices (k2_msualg_5 X0)) \wedge (l3_lattices (k2_msualg_5 \\ & X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow ((v1_partfun1 (k2_lattice3 X0) (u1_struct_0 X0)) \wedge ((v1_relat_2 \\ (k2_lattice3 X0)) \wedge ((v4_relat_2 (k2_lattice3 X0)) \wedge ((v8_relat_2 \\ (k2_lattice3 X0)) \wedge (m1_subset_1 (k2_lattice3 X0) (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow ((v1_orders_2 (g1_orders_2 X0 X1)) \wedge (l1_orders_2 (g1_orders_2 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k4_lattice3 X0 X1 = X1)) \quad (7)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (k3_lattice3 X0 = g1_orders_2 (u1_struct_0 X0) (k2_lattice3 X0)) \quad (8)$$

Assume the following.

$$\forall X0. k1_lattice5 X0 = k3_lattice3 (k2_msualg_5 X0) \quad (9)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v1_orders_2 X0) \Rightarrow (X0 = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0))) \quad (10)$$

Theorem 1

$$\forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k1_lattice5 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k1_lattice5 X0))) \Rightarrow ((r3_orders_2 (k1_lattice5 X0) X1 X2) \Leftrightarrow (r1_tarski X1 X2)))$$