

l43_poset_1

(TMNk6Rrubxpa97nkkgXyn1Ko7REtymCqppM)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_poset_1 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v6_orders_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v3_orders_2 \\ & X0) \wedge (l1_orders_2 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\ & X0 X1 X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (k1_yellow_0 X0 X1) (u1_struct_0 X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r1_yellow_0 X0 X1) \Rightarrow ((X2 = k1_yellow_0 X0 \\ & X1) \Leftrightarrow ((r2_lattice3 X0 X1 X2) \wedge (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r2_lattice3 X0 X1 X3) \Rightarrow (r1_orders_2 X0 X2 X3)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. \forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1_orders_2 X0 X3 X2)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2\ X0) \Rightarrow ((v1_poset_1\ X0) \Leftrightarrow ((v1_yellow_0 \\ X0) \wedge (\forall X1. ((v6_orders_2\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0)))))) \Rightarrow ((\neg v1_xboole_0\ X1) \Rightarrow (r1_yellow_0\ X0\ X1)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0\ X0) \wedge ((v1_orders_2\ X0) \wedge ((v3_orders_2 \\ X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_poset_1\ X0) \wedge (\\ l1_orders_2\ X0))))))) \Rightarrow (\forall X1. ((\neg v1_xboole_0\ X1) \wedge ((v6_orders_2 \\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))))) \Rightarrow (\forall X2. \\ (m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow ((X2 \in X1) \Rightarrow (r3_orders_2\ X0\ X2 \\ (k1_yellow_0\ X0\ X1)))))) \end{aligned}$$