

l55_poset_1

(TMHftdPZ34TUjWiWqr58NyUW2bju3c1AtnR)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 X1) \wedge \\ & ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_poset_1 \\ & X1) \wedge (l1_orders_2 X1))))))) \Rightarrow ((m1_subset_1 X0 (u1_struct_0 (k6_poset_1 \\ & X1 X1))) \Rightarrow ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 X1) (u1_struct_0 \\ & X1)) \wedge ((v2_poset_1 X0 X1 X1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge \\ & ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 \\ & X0) \wedge (l1_orders_2 X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1))))))))) \Rightarrow ((\neg v2_struct_0 (k6_poset_1 \\ & X0 X1)) \wedge ((v1_orders_2 (k6_poset_1 X0 X1)) \wedge ((v3_orders_2 (k6_poset_1 \\ & X0 X1)) \wedge ((v4_orders_2 (k6_poset_1 X0 X1)) \wedge ((v5_orders_2 (k6_poset_1 \\ & X0 X1)) \wedge (l1_orders_2 (k6_poset_1 X0 X1))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge \\ & ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 \\ & X0) \wedge (l1_orders_2 X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1))))))))) \Rightarrow (m1_subset_1 (k5_poset_1 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k4_poset_1 X0 X1) (k4_poset_1 \\ & X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\ & l1_orders_2 X0)))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (k6_poset_1 X0 X1 = g1_orders_2 \\ & (k4_poset_1 X0 X1) (k5_poset_1 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\ & l1_orders_2 X0)))))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k4_poset_1 X0 X1) (k4_poset_1 X0 \\ & X1))) \Rightarrow ((X2 = k5_poset_1 X0 X1) \Leftrightarrow (\forall X3. \forall X4. (k4_tarski \\ & X3 X4 \in X2) \Leftrightarrow ((X3 \in k4_poset_1 X0 X1) \wedge ((X4 \in k4_poset_1 X0 X1) \wedge (\exists X5. \\ & ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \wedge (\exists X6. ((v1_funct_1 X6) \wedge ((v1_funct_2 \\ & X6 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X6 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge ((X3 = X5) \wedge \\ & ((X4 = X6) \wedge (r1_yellow_2 (u1_struct_0 X0) X1 X5 X6)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 \\ X0 X1 X2) \Leftrightarrow (k4_tarski X1 X2 \in u1_orders_2 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_orders_2 X0) \Rightarrow (X0 = g1_orders_2 \\ (u1_struct_0 X0) (u1_orders_2 X0))) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\ l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k6_poset_1 X0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ (k6_poset_1 X0 X0)) \Rightarrow ((r3_orders_2 (k6_poset_1 X0 X0) X1 X2) \Rightarrow (\\ (X1 \in k4_poset_1 X0 X0) \wedge ((X2 \in k4_poset_1 X0 X0) \wedge (\exists X3.((v1_funct_1 \\ X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v2_poset_1 \\ X3 X0 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ X0) (u1_struct_0 X0)))))) \wedge (\exists X4.((v1_funct_1 X4) \wedge ((v1_funct_2 \\ X4 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v2_poset_1 X4 X0 X0) \wedge (\\ m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ X0)))))) \wedge ((X1 = X3) \wedge ((X2 = X4) \wedge (r1_yellow_2 (u1_struct_0 X0) \\ X0 X3 X4)))))))))) \end{aligned}$$