

l60_poset_1

(TMb2sFB972UPFuMNGEmu99ZrKSZ1YMuMjfU)

October 27, 2020

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 $k6_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r7_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0))) \Rightarrow (\forall X2. \forall X3. (g1_orders_2 X0 X1 = g1_orders_2 \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge \\ ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 \\ X0) \wedge (l1_orders_2 X0)))))))) \wedge ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))))) \Rightarrow ((\neg v2_struct_0 (k6_poset_1 \\ X0 X1)) \wedge ((v1_orders_2 (k6_poset_1 X0 X1)) \wedge ((v3_orders_2 (k6_poset_1 \\ X0 X1)) \wedge ((v4_orders_2 (k6_poset_1 X0 X1)) \wedge ((v5_orders_2 (k6_poset_1 \\ X0 X1)) \wedge (l1_orders_2 (k6_poset_1 X0 X1)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge \\ & ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 \\ & X0) \wedge (l1_orders_2 X0)))))) \wedge ((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1))))))))) \Rightarrow (m1_subset_1 (k5_poset_1 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k4_poset_1 X0 X1) (k4_poset_1 \\ & X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1. (((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (k6_poset_1 X0 X1 = g1_orders_2 \\ & (k4_poset_1 X0 X1) (k5_poset_1 X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (r7_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ & \forall X3. \neg (X2 \in X1) \wedge ((X3 \in X1) \wedge ((\neg k4_tarski X2 X3 \in X0) \wedge (\neg k4_tarski \\ & X3 X2 \in X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1. (((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\ & X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\ & ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k4_poset_1 X0 X1) (k4_poset_1 X0 \\ & X1)))) \Rightarrow ((X2 = k5_poset_1 X0 X1) \Leftrightarrow (\forall X3. \forall X4. (k4_tarski \\ & X3 X4 \in X2) \Leftrightarrow ((X3 \in k4_poset_1 X0 X1) \wedge ((X4 \in k4_poset_1 X0 X1) \wedge (\exists X5. \\ & ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \wedge (\exists X6. ((v1_funct_1 X6) \wedge ((v1_funct_2 \\ & X6 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X6 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \wedge ((X3 = X5) \wedge \\ & ((X4 = X6) \wedge (r1_yellow_2 (u1_struct_0 X0) X1 X5 X6)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow ((v6_orders_2 X1 X0) \Leftrightarrow (r7_relat_2 (u1_orders_2 \\ & X0) X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (8)$$

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

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v1_orders_2 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_poset_1 X0)\wedge(l1_orders_2 X0))))))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge((v6_orders_2 X1 (k6_poset_1 X0 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k6_poset_1 X0 X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0))\wedge((v5_orders_3 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X0))\wedge((v5_orders_3 X3 X0 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0))))))\Rightarrow(\neg(X2 \in X1)\wedge((X3 \in X1)\wedge((\neg r1_yellow_2 (u1_struct_0 X0) X0 X2 X3)\wedge(\neg r1_yellow_2 (u1_struct_0 X0) X0 X3 X2))))))))) \end{aligned}$$