

t7_poset_1

(TMYYH4VyRvDwTn8AcA9Wx1vnaGiCXy5WAMF)

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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 $v2_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_struct_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r4_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_orders_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge (l1_orders_2 \\
 & X1)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3. \\
 & ((\neg v1_xboole_0 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\
 & X0)))) \Rightarrow ((r4_waybel_0 X0 X1 (k6_struct_0 X0 X1 X2) X3) \wedge (r3_waybel_0 \\
 & X0 X1 (k6_struct_0 X0 X1 X2) X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_orders_2 \\
 & X0)) \wedge (((\neg v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge (l1_orders_2 X1))) \wedge \\
 & (m1_subset_1 X2 (u1_struct_0 X1)))) \Rightarrow ((v1_funct_1 (k6_struct_0 \\
 & X0 X1 X2)) \wedge ((v1_funct_2 (k6_struct_0 X0 X1 X2) (u1_struct_0 X0) \\
 & (u1_struct_0 X1)) \wedge (v5_orders_3 (k6_struct_0 X0 X1 X2) X0 X1)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l1_struct_0 X0)\wedge((\neg v2_struct_0 \\ & X1)\wedge(l1_struct_0 X1))\wedge(m1_subset_1 X2 (u1_struct_0 X1)))\Rightarrow(\\ & (v1_funct_1 (k6_struct_0 X0 X1 X2))\wedge((v1_funct_2 (k6_struct_0 \\ & X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 (k6_struct_0 \\ & X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X1)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v3_orders_2 X0)\wedge((v4_orders_2 \\ & X0)\wedge((v5_orders_2 X0)\wedge(l1_orders_2 X0)))))\Rightarrow(\forall X1.((\neg \\ & v2_struct_0 X1)\wedge((v3_orders_2 X1)\wedge((v4_orders_2 X1)\wedge((v5_orders_2 \\ & X1)\wedge(l1_orders_2 X1)))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow((v2_poset_1 \\ & X2 X0 X1)\Leftrightarrow((v5_orders_3 X2 X0 X1)\wedge(\forall X3.((\neg v1_xboole_0 X3)\wedge \\ & ((v6_orders_2 X3 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))))\Rightarrow(r4_waybel_0 X0 X1 X2 X3)))))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v1_orders_2 X0)\wedge((v3_orders_2 \\ & X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_poset_1 X0)\wedge(\\ & l1_orders_2 X0))))))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v1_orders_2 \\ & X1)\wedge((v3_orders_2 X1)\wedge((v4_orders_2 X1)\wedge((v5_orders_2 X1)\wedge \\ & ((v1_poset_1 X1)\wedge(l1_orders_2 X1))))))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0))\Rightarrow(v2_poset_1 (k6_struct_0 X1 X0 X2) X1 X0))) \end{aligned}$$