

t9_poset_1
(TMVKjyTECR8mE6YMBvmdH9JkvbTz5HNpYLF)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_abian : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\ & l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) \wedge ((v5_orders_3 X2 X0 X0) \wedge (m1_subset_1 X2 \\ & k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow \\ & ((X1 = k1_yellow_0 X0 (k2_poset_1 X0 X2)) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow ((r2_abian (u1_struct_0 X0) X3 X2) \Rightarrow (r3_orders_2 \\ & X0 X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\ & l1_orders_2 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) \wedge ((v5_orders_3 X2 X0 X0) \wedge (m1_subset_1 X2 \\ & k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow \\ & (((v2_poset_1 X2 X0 X0) \wedge (X1 = k1_yellow_0 X0 (k2_poset_1 X0 X2))) \Rightarrow \\ & (r2_abian (u1_struct_0 X0) X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0)\Rightarrow(m1_subset_1 (k1_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v1_orders_2 X0)\wedge((v3_orders_2 \\ & X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_poset_1 X0)\wedge \\ & l1_orders_2 X0))))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0))\wedge((v5_orders_3 X1 X0 X0)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0))))))\Rightarrow((v2_poset_1 X1 X0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0))\Rightarrow((X2 = k3_poset_1 X0 X1)\Leftrightarrow((r2_abian (u1_struct_0 \\ & X0) X2 X1)\wedge(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow((r2_abian \\ & (u1_struct_0 X0) X3 X1)\Rightarrow(r3_orders_2 X0 X2 X3))))))))) \quad (4) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v1_orders_2 X0)\wedge \\ & ((v3_orders_2 X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_poset_1 \\ & X0)\wedge(l1_orders_2 X0))))))\wedge((\neg v2_struct_0 X1)\wedge((v1_orders_2 \\ & X1)\wedge((v3_orders_2 X1)\wedge((v4_orders_2 X1)\wedge((v5_orders_2 X1)\wedge \\ & ((v1_poset_1 X1)\wedge(l1_orders_2 X1))))))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))\Rightarrow \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1))\wedge(v2_poset_1 X2 X0 X1)))\Rightarrow((v1_funct_1 X2)\wedge((v1_funct_2 X2 \\ & (u1_struct_0 X0) (u1_struct_0 X1))\wedge(v5_orders_3 X2 X0 X1)))))) \quad (5) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v1_orders_2 X0)\wedge((v3_orders_2 \\ & X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_poset_1 X0)\wedge \\ & l1_orders_2 X0))))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0))\wedge((v2_poset_1 X1 X0 X0)\wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0))))))\Rightarrow(k3_poset_1 X0 X1 = k1_yellow_0 X0 (k2_poset_1 X0 X1))) \end{aligned}$$