

t6_poset_1

(TMWEWz5YaYaTxv9No2vxU9w95XT8hjUsSsQ)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_poset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v6_orders_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
 & \quad X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1. ((\neg \\
 & v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
 & \quad X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge ((\\
 & v6_orders_2 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
 & \quad X0)))))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 \\
 & \quad X0) (u1_struct_0 X1)) \wedge ((v5_orders_3 X3 X0 X1) \wedge (m1_subset_1 X3 \\
 & \quad (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
 & ((\neg v1_xboole_0 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) \\
 & \quad X3 X2)) \wedge ((v6_orders_2 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 \\
 & \quad X1) X3 X2) X1) \wedge (m1_subset_1 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 \\
 & \quad X1) X3 X2) (k1_zfmisc_1 (u1_struct_0 X1)))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& \quad X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\
& \quad v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\
& \quad X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& \quad X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v2_poset_1 \\
& \quad X2 X0 X1) \Leftrightarrow ((v5_orders_3 X2 X0 X1) \wedge (\forall X3.((\neg v1_xboole_0 X3) \wedge \\
& \quad ((v6_orders_2 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\
& \quad X0)))))) \Rightarrow (r4_waybel_0 X0 X1 X2 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& \quad ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (\forall X2.((v1_funct_1 \\
& \quad X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad ((r4_waybel_0 X0 X1 X2 X3) \Leftrightarrow ((r1_yellow_0 X0 X3) \Rightarrow ((r1_yellow_0 \\
& \quad X1 (k7_reset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3)) \wedge (k1_yellow_0 \\
& \quad X1 (k7_reset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) = k3_funct_2 \\
& \quad (u1_struct_0 X0) (u1_struct_0 X1) X2 (k1_yellow_0 X0 X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow ((v1_poset_1 X0) \Leftrightarrow ((v1_yellow_0 \\
& \quad X0) \wedge (\forall X1.((v6_orders_2 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& \quad (u1_struct_0 X0)))))) \Rightarrow ((\neg v1_xboole_0 X1) \Rightarrow (r1_yellow_0 X0 X1))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_orders_2 X0) \wedge ((v3_orders_2 \\
& \quad X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_poset_1 X0) \wedge (\\
& \quad l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v1_orders_2 \\
& \quad X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\
& \quad ((v1_poset_1 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& \quad X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& \quad ((v2_poset_1 X2 X0 X1) \Leftrightarrow ((v5_orders_3 X2 X0 X1) \wedge (\forall X3.((\neg \\
& \quad v1_xboole_0 X3) \wedge ((v6_orders_2 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& \quad (u1_struct_0 X0)))))) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\
& \quad X1) X2 (k1_yellow_0 X0 X3) = k1_yellow_0 X1 (k7_reset_1 (u1_struct_0 \\
& \quad X0) (u1_struct_0 X1) X2 X3))))))
\end{aligned}$$