

t36_waybel_9
(TMcQ3pWWqysVahwyer7uwaynbhtdJGfrp51)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ 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 $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $l1_waybel_9 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_waybel_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $u1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k5_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(((X1 = k2_yellow_0 \\
& X0 X2) \wedge (r2_yellow_0 X0 X2)) \Rightarrow ((r1_lattice3 X0 X2 X1) \wedge (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 \\
& X0 X3 X1)))))) \wedge (((r1_lattice3 X0 X2 X1) \wedge (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow ((r1_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 X0 X3 \\
& X1)))))) \Rightarrow ((X1 = k2_yellow_0 X0 X2) \wedge (r2_yellow_0 X0 X2))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_reset_1 X0 X1 = k10_xtuple_0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge ((v8_pre_topc\ X0) \wedge ((v3_orders_2 \\
& X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_lattice3\ X0) \wedge \\
& ((v2_lattice3\ X0) \wedge ((v1_compts_1\ X0) \wedge (l1_waybel_9\ X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0\ X1) \wedge ((v4_orders_2\ X1) \wedge ((v7_waybel_0 \\
& X1) \wedge (l1_waybel_0\ X1\ X0)))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ X0)) \Rightarrow (((X2 = X3) \wedge \\
& ((\forall X4.(m1_subset_1\ X4\ (u1_struct_0\ X0)) \Rightarrow (v5_pre_topc \\
& (k4_waybel_1\ X0\ X4)\ X0\ X0)) \wedge (r3_waybel_9\ X0\ X1\ X2))) \Rightarrow (\forall X4. \\
& (m1_subset_1\ X4\ (u1_struct_0\ X0)) \Rightarrow ((r1_lattice3\ X0\ (k2_relset_1 \\
& (u1_struct_0\ X0)\ (u1_waybel_0\ X0\ X1))\ X4) \Rightarrow (r1_orders_2\ X0\ X4\ X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge ((v8_pre_topc\ X0) \wedge ((v3_orders_2 \\
& X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_lattice3\ X0) \wedge \\
& ((v2_lattice3\ X0) \wedge ((v1_compts_1\ X0) \wedge (l1_waybel_9\ X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0\ X1) \wedge ((v4_orders_2\ X1) \wedge ((v7_waybel_0 \\
& X1) \wedge (l1_waybel_0\ X1\ X0)))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ X0)) \Rightarrow (((X2 = X3) \wedge \\
& ((\forall X4.(m1_subset_1\ X4\ (u1_struct_0\ X0)) \Rightarrow (v5_pre_topc \\
& (k4_waybel_1\ X0\ X4)\ X0\ X0)) \wedge ((v11_waybel_0\ X1\ X0) \wedge (r3_waybel_9 \\
& X0\ X1\ X2)))) \Rightarrow (r1_lattice3\ X0\ (k2_relset_1\ (u1_struct_0\ X0)\ (u1_waybel_0 \\
& X0\ X1))\ X3))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((l1_struct_0\ X0) \wedge (l1_waybel_0\ X1\ X0)) \Rightarrow \\
& ((v1_funct_1\ (u1_waybel_0\ X0\ X1)) \wedge ((v1_funct_2\ (u1_waybel_0 \\
& X0\ X1)\ (u1_struct_0\ X1)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ (u1_waybel_0 \\
& X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X1)\ (u1_struct_0 \\
& X0))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(l1_waybel_9\ X0) \Rightarrow ((l1_pre_topc\ X0) \wedge (l1_orders_2\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0) \Rightarrow (l1_struct_0\ X0) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\
& (v1_relat_1\ X1) \Rightarrow (k5_yellow_2\ X0\ X1 = k2_yellow_0\ X0\ (k10_xtuple_0 \\
& X1)))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (l1_waybel_0 X1 X0) \Rightarrow (k1_waybel_9 X0 X1 = k5_yellow_2 X0 (u1_waybel_0 \\ & X0 X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge ((v8_pre_topc X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge \\ & ((v2_lattice3 X0) \wedge ((v1_compts_1 X0) \wedge (l1_waybel_9 X0)))))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. ((\\ & \neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 \\ & X2 X0)))) \Rightarrow (((\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (v5_pre_topc \\ & (k4_waybel_1 X0 X3) X0 X0)) \wedge ((v11_waybel_0 X2 X0) \wedge (r3_waybel_9 \\ & X0 X2 X1))) \Rightarrow (X1 = k1_waybel_9 X0 X2)))) \end{aligned}$$