

t35_waybel_9
(TMR7CDYtuCdPckCZ8EUfcC91jbszRSh8zhy)

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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 $v10_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(((X1 = k1_yellow_0 \\
& X0 X2) \wedge (r1_yellow_0 X0 X2)) \Rightarrow ((r2_lattice3 X0 X2 X1) \wedge (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 \\
& X0 X1 X3)))))) \wedge (((r2_lattice3 X0 X2 X1) \wedge (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow ((r2_lattice3 X0 X2 X3) \Rightarrow (r1_orders_2 X0 X1 \\
& X3)))))) \Rightarrow ((X1 = k1_yellow_0 X0 X2) \wedge (r1_yellow_0 X0 X2)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v3_orders_2 \\
& X0) \wedge (l1_orders_2 X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
& m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_orders_2 X0 X1 X2) \Leftrightarrow (r1_orders_2 \\
& X0 X1 X2))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0)\wedge((v8_pre_topc X0)\wedge((v3_orders_2 \\ & X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge \\ & ((v2_lattice3 X0)\wedge((v1_compts_1 X0)\wedge(l1_waybel_9 X0))))))\Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1)\wedge((v4_orders_2 X1)\wedge((v7_waybel_0 \\ & X1)\wedge(l1_waybel_0 X1 X0))))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(((X2 = X3)\wedge \\ & ((\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(v5_pre_topc \\ & (k4_waybel_1 X0 X4) X0 X0))\wedge(r3_waybel_9 X0 X1 X2))\Rightarrow(\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow((r2_lattice3 X0 (k2_relset_1 \\ & (u1_struct_0 X0) (u1_waybel_0 X0 X1)) X4)\Rightarrow(r3_orders_2 X0 X3 X4)))))) \quad (4) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0)\wedge((v8_pre_topc X0)\wedge((v3_orders_2 \\ & X0)\wedge((v4_orders_2 X0)\wedge((v5_orders_2 X0)\wedge((v1_lattice3 X0)\wedge \\ & ((v2_lattice3 X0)\wedge((v1_compts_1 X0)\wedge(l1_waybel_9 X0))))))\Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1)\wedge((v4_orders_2 X1)\wedge((v7_waybel_0 \\ & X1)\wedge(l1_waybel_0 X1 X0))))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(((X2 = X3)\wedge \\ & ((\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(v5_pre_topc \\ & (k4_waybel_1 X0 X4) X0 X0))\wedge((v10_waybel_0 X1 X0)\wedge(r3_waybel_9 \\ & X0 X1 X2))))\Rightarrow(r2_lattice3 X0 (k2_relset_1 (u1_struct_0 X0) (u1_waybel_0 \\ & X0 X1)) X3)))) \quad (5) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_struct_0 X0)\wedge(l1_waybel_0 X1 X0))\Rightarrow \\ & ((v1_funct_1 (u1_waybel_0 X0 X1))\wedge((v1_funct_2 (u1_waybel_0 \\ & X0 X1) (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_waybel_0 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \quad (6) \end{aligned}$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0)\Rightarrow((l1_pre_topc X0)\wedge(l1_orders_2 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (v1_relat_1 X1) \Rightarrow (k4_yellow_2 X0 X1 = k1_yellow_0 X0 (k10_xtuple_0 \\ & X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (l1_waybel_0 X1 X0) \Rightarrow (k1_waybel_2 X0 X1 = k4_yellow_2 X0 (u1_waybel_0 \\ & X0 X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (11)$$

Assume the following.

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

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge ((v8_pre_topc X0) \wedge ((v3_orders_2 \\ & X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge \\ & ((v2_lattice3 X0) \wedge ((v1_compts_1 X0) \wedge (l1_waybel_9 X0))))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. ((\\ & \neg v2_struct_0 X2) \wedge ((v4_orders_2 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 \\ & X2 X0)))) \Rightarrow ((\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (v5_pre_topc \\ & (k4_waybel_1 X0 X3) X0 X0)) \wedge ((v10_waybel_0 X2 X0) \wedge (r3_waybel_9 \\ & X0 X2 X1))) \Rightarrow (X1 = k1_waybel_2 X0 X2)))) \end{aligned}$$