

t40_waybel_9

(TMZyd1kjNarBwn98UU16JHZJ4yk2sSogfQQ)

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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 $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_yellow_0 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ 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 $v11_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_waybel_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v10_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_waybel_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_lattice3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k6_partfun1 : \iota \Rightarrow \iota$ 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 $k2_waybel_9 : \iota \Rightarrow \iota$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_waybel_9 : \iota \Rightarrow \iota$ be given. Let $v9_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k3_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(k9_xtuple_0 (k4_relat_1 X0) = X0) \wedge (k10_xtuple_0 (k4_relat_1 X0) = X0) \quad (1)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge ((v8_pre_topc\ X0) \wedge ((v3_orders_2 \\
& X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_lattice3\ X0) \wedge \\
& ((v2_lattice3\ X0) \wedge ((v1_compts_1\ X0) \wedge (l1_waybel_9\ X0))))))) \Rightarrow \\
& ((\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (v5_pre_topc \\
& (k4_waybel_1\ X0\ X1)\ X0\ X0)) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge ((\\
& v4_orders_2\ X1) \wedge ((v7_waybel_0\ X1) \wedge (l1_waybel_0\ X1\ X0)))) \Rightarrow ((\\
& v11_waybel_0\ X1\ X0) \Rightarrow ((r2_waybel_9\ X0\ X1) \wedge (k1_waybel_9\ X0\ X1 \in k10_yellow_6 \\
& X0\ X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge ((v8_pre_topc\ X0) \wedge ((v3_orders_2 \\
& X0) \wedge ((v4_orders_2\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_lattice3\ X0) \wedge \\
& ((v2_lattice3\ X0) \wedge ((v1_compts_1\ X0) \wedge (l1_waybel_9\ X0))))))) \Rightarrow \\
& ((\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (v5_pre_topc \\
& (k4_waybel_1\ X0\ X1)\ X0\ X0)) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge ((\\
& v4_orders_2\ X1) \wedge ((v7_waybel_0\ X1) \wedge (l1_waybel_0\ X1\ X0)))) \Rightarrow ((\\
& v10_waybel_0\ X1\ X0) \Rightarrow ((r1_waybel_9\ X0\ X1) \wedge (k1_waybel_2\ X0\ X1 \in k10_yellow_6 \\
& X0\ X1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(((X1 = k2_yellow_0 \\
& X0\ X2) \wedge (r2_yellow_0\ X0\ X2)) \Rightarrow ((r1_lattice3\ X0\ X2\ X1) \wedge (\forall X3. \\
& (m1_subset_1\ X3\ (u1_struct_0\ X0)) \Rightarrow ((r1_lattice3\ X0\ X2\ X3) \Rightarrow (r1_orders_2 \\
& X0\ X3\ X1)))))) \wedge (((r1_lattice3\ X0\ X2\ X1) \wedge (\forall X3.(m1_subset_1 \\
& X3\ (u1_struct_0\ X0)) \Rightarrow ((r1_lattice3\ X0\ X2\ X3) \Rightarrow (r1_orders_2\ X0\ X3 \\
& X1)))) \Rightarrow ((X1 = k2_yellow_0\ X0\ X2) \wedge (r2_yellow_0\ X0\ X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v5_orders_2\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(((X1 = k1_yellow_0 \\
& X0\ X2) \wedge (r1_yellow_0\ X0\ X2)) \Rightarrow ((r2_lattice3\ X0\ X2\ X1) \wedge (\forall X3. \\
& (m1_subset_1\ X3\ (u1_struct_0\ X0)) \Rightarrow ((r2_lattice3\ X0\ X2\ X3) \Rightarrow (r1_orders_2 \\
& X0\ X1\ X3)))))) \wedge (((r2_lattice3\ X0\ X2\ X1) \wedge (\forall X3.(m1_subset_1 \\
& X3\ (u1_struct_0\ X0)) \Rightarrow ((r2_lattice3\ X0\ X2\ X3) \Rightarrow (r1_orders_2\ X0\ X1 \\
& X3)))) \Rightarrow ((X1 = k1_yellow_0\ X0\ X2) \wedge (r1_yellow_0\ X0\ X2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.k6_partfun1\ X0 = k4_relat_1\ X0 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1) \wedge (v5_relat_1\ X1\ X0)) \Rightarrow (\\
k2_relset_1\ X0\ X1 = k10_xtuple_0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((\neg v2_struct_0 (k2_waybel_9 X0)) \wedge (v6_waybel_0 (k2_waybel_9 X0) X0)) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v6_waybel_0 (k3_waybel_9 X0) X0) \wedge ((v9_waybel_0 (k3_waybel_9 X0) X0) \wedge (v11_waybel_0 (k3_waybel_9 X0) X0))) \quad (9)$$

Assume the following.

$$\forall X0.((v2_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v6_waybel_0 (k3_waybel_9 X0) X0) \wedge (v7_waybel_0 (k3_waybel_9 X0))) \quad (10)$$

Assume the following.

$$\forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v4_orders_2 (k3_waybel_9 X0)) \wedge (v6_waybel_0 (k3_waybel_9 X0) X0)) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((\neg v2_struct_0 (k3_waybel_9 X0)) \wedge (v6_waybel_0 (k3_waybel_9 X0) X0)) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v6_waybel_0 (k2_waybel_9 X0) X0) \wedge ((v8_waybel_0 (k2_waybel_9 X0) X0) \wedge (v10_waybel_0 (k2_waybel_9 X0) X0))) \quad (13)$$

Assume the following.

$$\forall X0.((v1_lattice3 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v6_waybel_0 (k2_waybel_9 X0) X0) \wedge (v7_waybel_0 (k2_waybel_9 X0))) \quad (14)$$

Assume the following.

$$\forall X0.((v4_orders_2 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v4_orders_2 (k2_waybel_9 X0)) \wedge (v6_waybel_0 (k2_waybel_9 X0) X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_partfun1 (k6_partfun1 X0) X0) \wedge (m1_subset_1 (k6_partfun1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.v1_relat_1 (k4_relat_1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v6_waybel_0 (k3_waybel_9 X0) X0) \wedge (l1_waybel_0 (k3_waybel_9 X0) X0)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k2_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (21)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v6_waybel_0 (k2_waybel_9 X0) X0) \wedge (l1_waybel_0 (k2_waybel_9 X0) X0)) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k1_yellow_0 X0 X1) (u1_struct_0 X0)) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.((v6_waybel_0 X1 X0) \wedge \\ (l1_waybel_0 X1 X0)) \Rightarrow ((X1 = k3_waybel_9 X0) \Leftrightarrow ((u1_struct_0 X1 = \\ u1_struct_0 X0) \wedge ((u1_orders_2 X1 = k3_relset_1 (u1_struct_0 X0) \\ (u1_struct_0 X0) (u1_orders_2 X0)) \wedge (u1_waybel_0 X0 X1 = k3_struct_0 \\ X0)))))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_yellow_0 X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (r2_lattice3 X0 (u1_struct_0 X0) X1))) \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.((v6_waybel_0 X1 X0) \wedge \\ (l1_waybel_0 X1 X0)) \Rightarrow ((X1 = k2_waybel_9 X0) \Leftrightarrow ((g1_orders_2 (u1_struct_0 \\ X1) (u1_orders_2 X1) = g1_orders_2 (u1_struct_0 X0) (u1_orders_2 \\ X0)) \wedge (u1_waybel_0 X0 X1 = k3_struct_0 X0)))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_yellow_0 X0) \Leftrightarrow (\exists X1.(m1_subset_1 X1 (u1_struct_0 X0)) \wedge (r1_lattice3 X0 (u1_struct_0 X0) X1))) \quad (27)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_waybel_0 X1 X0) \Rightarrow ((r2_waybel_9 X0 X1) \Leftrightarrow (r2_yellow_0 X0 (k2_relset_1 (u1_struct_0 X0) (u1_waybel_0 X0 X1)))))) \quad (28)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k3_struct_0 X0 = k6_partfun1 (u1_struct_0 X0)) \quad (29)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_waybel_0 X1 X0) \Rightarrow ((r1_waybel_9 X0 X1) \Leftrightarrow (r1_yellow_0 X0 (k2_relset_1 (u1_struct_0 X0) (u1_waybel_0 X0 X1)))))) \quad (30)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (((v1_yellow_0 X0) \wedge (v2_yellow_0 X0)) \Rightarrow (v3_yellow_0 X0)) \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (32)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (33)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v8_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v1_compts_1 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \\ & ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (v5_pre_topc (k4_waybel_1 X0 X1) X0 X0)) \Rightarrow (v3_yellow_0 X0)) \end{aligned}$$