

t8_waybel33 (TM-
PdE2T2t3N4gGcFAM6MzHuLztMYfguNjMu)

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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 $v24_waybel_0 : \iota \Rightarrow o$ be given. Let $v25_waybel_0 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $k13_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_waybel28 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ 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 $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $m4_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v24_waybel_0 X0) \wedge ((v25_waybel_0 X0) \wedge ((v2_lattice3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\ & X1) \wedge ((v5_orders_2 X1) \wedge ((v24_waybel_0 X1) \wedge ((v25_waybel_0 X1) \wedge \\ & ((v2_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow ((g1_orders_2 (u1_struct_0 \\ & X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ & X1)) \Rightarrow (r1_tarski (u1_pre_topc (k13_yellow_6 X0 (k3_waybel28 X0))) \\ & (u1_pre_topc (k13_yellow_6 X1 (k3_waybel28 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))) \Rightarrow (\forall X2. \forall X3. (g1_orders_2 X0 X1 = g1_orders_2 \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (m4_yellow_6 (k3_waybel28 X0) X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge (m4_yellow_6 X1 X0)) \Rightarrow ((v1_pre_topc (k13_yellow_6 X0 X1)) \wedge (l1_pre_topc (k13_yellow_6 X0 X1))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m4_yellow_6 X1 X0) \Rightarrow (\forall X2.((v1_pre_topc X2) \wedge (l1_pre_topc \\ & X2)) \Rightarrow ((X2 = k13_yellow_6 X0 X1) \Leftrightarrow ((u1_struct_0 X2 = u1_struct_0 \\ & X0) \wedge (u1_pre_topc X2 = ReplSep (toset (\lambda X3 : \iota.m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X0)))) (\lambda X3 : \iota.\forall X4.(\\ & m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((X4 \in X3) \Rightarrow (\forall X5.((\neg v2_struct_0 \\ & X5) \wedge ((v4_orders_2 X5) \wedge ((v7_waybel_0 X5) \wedge (l1_waybel_0 X5 X0)))) \Rightarrow \\ & ((k4_tarski X5 X4 \in X1) \Rightarrow (r1_waybel_0 X0 X5 X3)))))) (\lambda X3 : \iota. \\ & X3)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v2_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v1_pre_topc X0) \Rightarrow (X0 = g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0))) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ & X0) \wedge ((v24_waybel_0 X0) \wedge ((v25_waybel_0 X0) \wedge ((v2_lattice3 X0) \wedge \\ & (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge ((v4_orders_2 \\ & X1) \wedge ((v5_orders_2 X1) \wedge ((v24_waybel_0 X1) \wedge ((v25_waybel_0 X1) \wedge \\ & ((v2_lattice3 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow ((g1_orders_2 (u1_struct_0 \\ & X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 X1) (u1_orders_2 \\ & X1)) \Rightarrow (k13_yellow_6 X0 (k3_waybel28 X0) = k13_yellow_6 X1 (k3_waybel28 \\ & X1)))))) \end{aligned}$$