

t29_waybel25

(TMPkNDrxrRfuziF7LKoS1MvsQ1BCkUSp6ab)

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Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v3_lattice3 : \iota \Rightarrow o$ be given. Let $v4_waybel11 : \iota \Rightarrow o$ be given. Let $l1_waybel_9 : \iota \Rightarrow o$ be given. Let $v1_waybel25 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $r2_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_waybel25 : \iota \Rightarrow \iota$ be given. Let $g1_waybel_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_waybel_9 : \iota \Rightarrow o$ be given. Let $v6_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_waybel11 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((\\ & g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\ & X1) (u1_orders_2 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X1))) \Rightarrow (((X2 = X3) \wedge (v1_waybel_0 X2 X0)) \Rightarrow (v1_waybel_0 \\ & X3 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow ((\\ & g1_orders_2 (u1_struct_0 X0) (u1_orders_2 X0) = g1_orders_2 (u1_struct_0 \\ & X1) (u1_orders_2 X1)) \Rightarrow (\forall X2.(r1_yellow_0 X0 X2) \Rightarrow (k1_yellow_0 \\ & X0 X2 = k1_yellow_0 X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v3_lattice3 \\ & X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(r1_yellow_0 X0 X1) \wedge (r2_yellow_0 \\ & X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc\ X0)\wedge((v3_orders_2\ X0)\wedge((v4_orders_2 \\ X0)\wedge((v5_orders_2\ X0)\wedge((v1_lattice3\ X0)\wedge((v2_lattice3\ X0)\wedge \\ ((v3_lattice3\ X0)\wedge((v4_waybel11\ X0)\wedge(l1_waybel_9\ X0))))))))\Rightarrow \\ (k1_waybel25\ X0 = g1_waybel_9\ (u1_struct_0\ X0)\ (u1_orders_2\ X0) \\ (u1_pre_topc\ X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X0)))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k1_zfmisc_1 \\ X0))))\Rightarrow(\forall X3.\forall X4.\forall X5.(g1_waybel_9\ X0\ X1\ X2 = \\ g1_waybel_9\ X3\ X4\ X5)\Rightarrow((X0 = X3)\wedge((X1 = X4)\wedge(X2 = X5)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc\ X0)\wedge((v3_orders_2\ X0)\wedge((v4_orders_2 \\ X0)\wedge((v5_orders_2\ X0)\wedge((v1_lattice3\ X0)\wedge((v2_lattice3\ X0)\wedge \\ ((v3_lattice3\ X0)\wedge((v4_waybel11\ X0)\wedge(l1_waybel_9\ X0))))))))\Rightarrow \\ ((v3_lattice3\ (k1_waybel25\ X0))\wedge(v1_waybel_9\ (k1_waybel25\ X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge((v6_pre_topc \\ X0)\wedge(l1_pre_topc\ X0))))\Rightarrow((v5_orders_2\ (k1_waybel25\ X0))\wedge(v1_waybel_9 \\ (k1_waybel25\ X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow((\neg v2_struct_0 \\ (k1_waybel25\ X0))\wedge(v1_waybel_9\ (k1_waybel25\ X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0)\Rightarrow(m1_subset_1\ (u1_pre_topc\ X0)\ (k1_zfmisc_1 \\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2\ X0)\Rightarrow(m1_subset_1\ (u1_orders_2\ X0)\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1_waybel_9\ X0)\Rightarrow((l1_pre_topc\ X0)\wedge(l1_orders_2\ X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0)\Rightarrow((v1_waybel_9\ (k1_waybel25\ X0))\wedge \\ (l1_waybel_9\ (k1_waybel25\ X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v1_waybel25 X0) \Leftrightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_waybel_0 \\ X1 (k1_waybel25 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ (k1_waybel25 X0)))))) \Rightarrow ((r1_yellow_0 (k1_waybel25 X0) X1) \wedge (\forall X2. \\ ((v3_pre_topc X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ X0)))) \Rightarrow (\neg(k1_yellow_0 (k1_waybel25 X0) X1 \in X2) \wedge (r1_xboole_0 \\ X1 X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow ((v1_waybel11 X1 X0) \Leftrightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge (\\ (v1_waybel_0 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ X0)))) \Rightarrow (\neg(k1_yellow_0 X0 X2 \in X1) \wedge (r1_xboole_0 X2 X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_waybel11 \\ X0) \wedge (l1_waybel_9 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Rightarrow ((v13_waybel_0 X1 X0) \wedge \\ (v1_waybel11 X1 X0)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_waybel_9 X0) \Rightarrow (((v2_pre_topc X0) \wedge ((v3_orders_2 \\ X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge \\ ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge (v4_waybel11 X0)))))) \Rightarrow \\ ((v2_pre_topc X0) \wedge ((v6_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge (v2_lattice3 X0)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow ((v1_lattice3 X0) \Rightarrow (\neg v2_struct_0 X0)) \quad (17)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((v1_waybel_9 X0) \Rightarrow (X0 = g1_waybel_9 \\ (u1_struct_0 X0) (u1_orders_2 X0) (u1_pre_topc X0))) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))) \Rightarrow \\ (v1_waybel25 X0) \end{aligned}$$