

t40_waybel11

(TMQopqoyxTJsd4un7pu5MqUQLZXobZ1foLF)

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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 $v3_waybel_3 : \iota \Rightarrow o$ be given. Let $k12_yellow_6 : \iota \Rightarrow \iota$ be given. Let $k2_waybel11 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m4_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v7_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v4_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_yellow_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m4_yellow_6 X1 X0) \Rightarrow ((k12_yellow_6 (k13_yellow_6 X0 X1) = X1) \Leftrightarrow \\ & (v8_yellow_6 X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v3_lattice3 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow \\ & ((v7_yellow_6 (k2_waybel11 X0) X0) \Rightarrow (v3_waybel_3 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0)))))))))) \Rightarrow \\ & (g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0) = k13_yellow_6 \\ & X0 (k2_waybel11 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1))) \Rightarrow ((g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0) = g1_pre_topc \\ (u1_struct_0 X1) (u1_pre_topc X1)) \Rightarrow (k12_yellow_6 X0 = k12_yellow_6 \\ X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ (m4_yellow_6 X1 X0)) \Rightarrow ((v1_pre_topc (k13_yellow_6 X0 X1)) \wedge (v2_pre_topc \\ (k13_yellow_6 X0 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ (m4_yellow_6 X1 X0)) \Rightarrow ((\neg v2_struct_0 (k13_yellow_6 X0 X1)) \wedge (v1_pre_topc \\ (k13_yellow_6 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v4_yellow_6 (k12_yellow_6 X0) X0) \wedge ((v5_yellow_6 (k12_yellow_6 \\ X0) X0) \wedge ((v6_yellow_6 (k12_yellow_6 X0) X0) \wedge (v7_yellow_6 (k12_yellow_6 \\ X0) X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 \\ X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge ((v3_lattice3 X0) \wedge \\ ((v3_waybel_3 X0) \wedge (l1_orders_2 X0)))))))) \Rightarrow (v8_yellow_6 (k2_waybel11 \\ X0) X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_waybel_9 X0) \Rightarrow ((l1_pre_topc X0) \wedge (l1_orders_2 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ X0))) \Rightarrow (m4_yellow_6 (k2_waybel11 X0) X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ (m4_yellow_6 X1 X0)) \Rightarrow ((v1_pre_topc (k13_yellow_6 X0 X1)) \wedge (l1_pre_topc \\ (k13_yellow_6 X0 X1))) \end{aligned} \quad (12)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v1_pre_topc X0) \Rightarrow (X0 = g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0))) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ & X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 X0) \wedge ((v2_lattice3 X0) \wedge \\ & ((v3_lattice3 X0) \wedge ((v4_waybel11 X0) \wedge (l1_waybel_9 X0))))))) \Rightarrow \\ & ((v3_waybel_3 X0) \Leftrightarrow (k12_yellow_6 X0 = k2_waybel11 X0)) \end{aligned}$$