

t23_waybel26

(TMTHFzWGFipkoK4kpmJtAickBr36RKz5zdQ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v6_pre_topc : \iota \Rightarrow o$ be given. Let $v1_waybel25 : \iota \Rightarrow o$ be given. Let $r1_waybel18 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_lattice3 : \iota \Rightarrow o$ be given. Let $k1_waybel26 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_waybel_3 : \iota \Rightarrow o$ 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 $l1_orders_2 : \iota \Rightarrow o$ be given. Let $r5_waybel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_borsuk_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_t_0topsp : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\ X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.((\neg \\ v2_struct_0 X1) \wedge ((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 \\ X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (((r5_waybel_1 X0 X1) \wedge (v3_waybel_3 \\ X0)) \Rightarrow (v3_waybel_3 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1)))) \Rightarrow ((r1_waybel18 X0 X1) \Leftrightarrow (\exists X2.((\neg v2_struct_0 X2) \wedge (\\ m1_pre_topc X2 X1)) \wedge ((r1_borsuk_1 X1 X2) \wedge (r1_t_0topsp X2 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((v6_pre_topc \\ X1) \wedge ((v1_waybel25 X1) \wedge (l1_pre_topc X1)))))) \Rightarrow (\forall X2.((\neg \\ v2_struct_0 X2) \wedge (m1_pre_topc X2 X1)) \Rightarrow (((r1_borsuk_1 X1 X2) \wedge (\\ (v3_lattice3 (k1_waybel26 X0 X1)) \wedge (v3_waybel_3 (k1_waybel26 \\ X0 X1)))) \Rightarrow ((v3_lattice3 (k1_waybel26 X0 X2)) \wedge (v3_waybel_3 (k1_waybel26 \\ X0 X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v2_pre_topc X2) \wedge (l1_pre_topc \\ X2)))) \Rightarrow ((r1_t_0topsp X1 X2) \Rightarrow (r5_waybel_1 (k1_waybel26 X0 X1) (\\ k1_waybel26 X0 X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ ((\neg v2_struct_0 X1) \wedge (l1_orders_2 X1)) \Rightarrow (((r5_waybel_1 X0 X1) \wedge \\ (v3_lattice3 X0)) \Rightarrow (v3_lattice3 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\ (l1_pre_topc X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((\\ v6_pre_topc X1) \wedge (l1_pre_topc X1)))))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 \\ X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 X0 X1)) \wedge (v5_orders_2 (k1_waybel26 \\ X0 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\ (l1_pre_topc X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1)))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 X0 X1)) \wedge ((v1_monoid_0 (k1_waybel26 \\ X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 X0 X1)) \wedge ((v3_orders_2 (k1_waybel26 \\ X0 X1)) \wedge (v4_orders_2 (k1_waybel26 X0 X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\ (l1_pre_topc X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1)))) \Rightarrow ((\neg v2_struct_0 (k1_waybel26 X0 X1)) \wedge ((v1_orders_2 (k1_waybel26 \\ X0 X1)) \wedge (l1_orders_2 (k1_waybel26 X0 X1)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (v2_pre_topc X1)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v6_pre_topc \\ X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow ((\neg \\ v2_struct_0 X1) \Rightarrow ((\neg v2_struct_0 X1) \wedge (v6_pre_topc X1)))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge ((v6_pre_topc \\ & X1) \wedge ((v1_waybel25 X1) \wedge (l1_pre_topc X1))))) \Rightarrow (\forall X2.((\neg \\ & v2_struct_0 X2) \wedge ((v2_pre_topc X2) \wedge ((v6_pre_topc X2) \wedge ((v1_waybel25 \\ & X2) \wedge (l1_pre_topc X2))))) \Rightarrow (((r1_waybel18 X1 X2) \wedge ((v3_lattice3 \\ & (k1_waybel26 X0 X2)) \wedge (v3_waybel_3 (k1_waybel26 X0 X2)))) \Rightarrow ((v3_lattice3 \\ & (k1_waybel26 X0 X1)) \wedge (v3_waybel_3 (k1_waybel26 X0 X1))))) \end{aligned}$$