

t37_yellow_6 (TMG-
mDzT6hci6nS3oEqd35AY5U31SUZrBCuH)

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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 $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v7_waybel_0 : \iota \Rightarrow o$ be given. Let $l1_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r1_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_waybel_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_waybel_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_yellow_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (\forall X2. (r1_waybel_0 \\ & X0 X1 X2) \Leftrightarrow (\neg r2_waybel_0 X0 X1 (k6_subset_1 (u1_struct_0 X0) X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2. \forall X3. (m2_yellow_6 X3 X0 X1) \Rightarrow ((X3 = \\ & k5_yellow_6 X0 X1 X2) \Rightarrow (r1_waybel_0 X0 X3 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2. (r2_waybel_0 X0 X1 X2) \Rightarrow (m2_yellow_6 (k5_yellow_6 \\ & X0 X1 X2) X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2.(r1_waybel_0 X0 X1 X2) \Rightarrow (r2_waybel_0 X0 X1 \\ & X2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2.(m2_yellow_6 X2 X0 X1) \Rightarrow (\forall X3.(r2_waybel_0 \\ & X0 X2 X3) \Rightarrow (r2_waybel_0 X0 X1 X3))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_waybel_0 X1 X0)) \Rightarrow (\forall X2.(r2_waybel_0 \\ & X0 X1 X2) \Leftrightarrow (\neg r1_waybel_0 X0 X1 (k6_subset_1 (u1_struct_0 X0) X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1_struct_0 X0) \wedge ((v4_orders_2 \\ & X1) \wedge (l1_waybel_0 X1 X0))) \Rightarrow ((v4_orders_2 (k5_yellow_6 X0 X1 X2)) \wedge \\ & ((v6_waybel_0 (k5_yellow_6 X0 X1 X2) X0) \wedge (v2_yellow_6 (k5_yellow_6 \\ & X0 X1 X2) X0 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 X1) \wedge (l1_waybel_0 \\ & X1 X0)))) \Rightarrow (\forall X2.(m2_yellow_6 X2 X0 X1) \Rightarrow ((\neg v2_struct_0 \\ & X2) \wedge ((v4_orders_2 X2) \wedge ((v7_waybel_0 X2) \wedge (l1_waybel_0 X2 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\ & (l1_pre_topc X0))) \wedge ((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((\\ & v7_waybel_0 X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (m1_subset_1 (k10_yellow_6 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 \\
& X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow ((X2 = k10_yellow_6 X0 X1) \Leftrightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X2) \Leftrightarrow (\forall X4.(m1_connsp_2 X4 X0 \\
& X3) \Rightarrow (r1_waybel_0 X0 X1 X4))))))
\end{aligned} \tag{11}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v4_orders_2 X1) \wedge ((v7_waybel_0 \\
& X1) \wedge (l1_waybel_0 X1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\neg(\neg X2 \in k10_yellow_6 X0 X1) \wedge (\forall X3.(m2_yellow_6 X3 \\
& X0 X1) \Rightarrow (\exists X4.(m2_yellow_6 X4 X0 X3) \wedge (X2 \in k10_yellow_6 X0 \\
& X4))))))
\end{aligned}$$