

t60_waybel34 (TMP4SvkDuA9sckXyF88mSUy8szsz21faFb8)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_waybel34 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_yellow_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2\ X0) \Rightarrow (\forall X1.((v4_yellow_0\ X1\ X0) \wedge \\ & (m1_yellow_0\ X1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (u1_struct_0\ X0)) \Rightarrow (\forall X4. \\ & (m1_subset_1\ X4\ (u1_struct_0\ X1)) \Rightarrow (\forall X5.(m1_subset_1\ X5 \\ & (u1_struct_0\ X1)) \Rightarrow (((X4 = X2) \wedge ((X5 = X3) \wedge ((r1_orders_2\ X0\ X2\ X3) \wedge \\ & (X4 \in u1_struct_0\ X1)))) \Rightarrow (r1_orders_2\ X1\ X4\ X5)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0\ X1) \wedge (m1_yellow_0\ X1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X1)) \Rightarrow (m1_subset_1\ X2\ (u1_struct_0\ X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_yellow_0\ X0) \wedge (l1_orders_2\ X0)))) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (r1_orders_2\ X0\ (k3_yellow_0\ X0)\ X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1\ X0\ X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_orders_2\ X0) \Rightarrow (\forall X1.(m1_yellow_0\ X1\ X0) \Rightarrow \\ & (l1_orders_2\ X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_orders_2\ X0) \Rightarrow (m1_subset_1\ (k3_yellow_0\ X0)\ (u1_struct_0\ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2\ X0) \Rightarrow ((v5_orders_2\ X0) \Leftrightarrow (\forall X1.(\\ m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2 \\ (u1_struct_0\ X0)) \Rightarrow (((r1_orders_2\ X0\ X1\ X2) \wedge (r1_orders_2\ X0\ X2 \\ X1)) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\ (m1_yellow_0\ X1\ X0) \Rightarrow ((v7_waybel34\ X1\ X0) \Leftrightarrow (k3_yellow_0\ X0 \in u1_struct_0 \\ X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v5_orders_2\ X0) \wedge (l1_orders_2\ X0)) \Rightarrow (\forall X1. \\ (m1_yellow_0\ X1\ X0) \Rightarrow ((v4_yellow_0\ X1\ X0) \Rightarrow ((v5_orders_2\ X1) \wedge (\\ v4_yellow_0\ X1\ X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_yellow_0 \\ X0) \wedge (l1_orders_2\ X0)))) \Rightarrow (\forall X1.(m1_yellow_0\ X1\ X0) \Rightarrow (((\\ v4_yellow_0\ X1\ X0) \wedge (v7_waybel34\ X1\ X0)) \Rightarrow ((\neg v2_struct_0\ X1) \wedge (\\ (v1_yellow_0\ X1) \wedge (v4_yellow_0\ X1\ X0)))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v5_orders_2\ X0) \wedge ((v1_yellow_0 \\ X0) \wedge (l1_orders_2\ X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge ((v4_yellow_0 \\ X1\ X0) \wedge ((v7_waybel34\ X1\ X0) \wedge (m1_yellow_0\ X1\ X0)))) \Rightarrow (k3_yellow_0 \\ X1 = k3_yellow_0\ X0)) \end{aligned}$$