

t4_waybel_1
(TMXXtHssFZ6LTEAmtKZh5z48fPTgAnVitBc)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v2_yellow_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $k11_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_yellow_0 : \iota \Rightarrow \iota$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $k10_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_yellow_0 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (r1_orders_2 X0 X1 (k4_yellow_0 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge (l1_orders_2 \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r1_orders_2 \\ X0 X1 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_lattice3 \\ X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 = k11_lattice3 X0 X1 X2) \Leftrightarrow \\ ((r1_orders_2 X0 X3 X1) \wedge ((r1_orders_2 X0 X3 X2) \wedge (\forall X4. (m1_subset_1 \\ X4 (u1_struct_0 X0)) \Rightarrow (((r1_orders_2 X0 X4 X1) \wedge (r1_orders_2 X0 \\ X4 X2)) \Rightarrow (r1_orders_2 X0 X4 X3)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v1_lattice3 \\
& X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 = k10_lattice3 X0 X1 X2) \Leftrightarrow \\
& ((r1_orders_2 X0 X1 X3) \wedge ((r1_orders_2 X0 X2 X3) \wedge (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X1 X4) \wedge (r1_orders_2 X0 \\
& X2 X4)) \Rightarrow (r1_orders_2 X0 X3 X4))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (m1_subset_1 (k4_yellow_0 X0) (u1_struct_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l1_orders_2 X0) \Rightarrow (k4_yellow_0 X0 = k2_yellow_0 X0 k1_xboole_0) \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_orders_2 X0) \wedge ((v2_yellow_0 \\
& X0) \wedge (l1_orders_2 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (((v2_lattice3 X0) \wedge ((v4_orders_2 X0) \wedge (v3_orders_2 X0))) \Rightarrow \\
& (k11_lattice3 X0 (k4_yellow_0 X0) X1 = X1)) \wedge ((v1_lattice3 X0) \Rightarrow \\
& (k10_lattice3 X0 (k4_yellow_0 X0) X1 = k4_yellow_0 X0)))
\end{aligned}$$